

JUL 6 1960

CRPL-F 190 PART A

Reference book not to be
taken from the library.

FOR OFFICIAL USE

PART A
IONOSPHERIC DATA

ISSUED
JUNE 1960

U. S. DEPARTMENT OF COMMERCE
NATIONAL BUREAU OF STANDARDS
CENTRAL RADIO PROPAGATION LABORATORY
BOULDER, COLORADO

CRPL-F 190
PART A

NATIONAL BUREAU OF STANDARDS
CENTRAL RADIO PROPAGATION LABORATORY
BOULDER, COLORADO

Issued
22 June 1960

IONOSPHERIC DATA

CONTENTS

	<u>Page</u>
Symbols, Terminology, Conventions	ii
World-Wide Sources of Ionospheric Data.	v
Tabulations of Electron Density Data.	vii
Tables of Ionospheric Data.	1
Graphs of Ionospheric Data.	13
Index of Tables and Graphs of Ionospheric Data in CRPL-F190 (Part A)	49

SYMBOLS. TERMINOLOGY. CONVENTIONS

Beginning with data reported for January 1952, and continuing through December 1956, the symbols, terminology, and conventions for the determination of median values used in this report (CRPL-F series) conform as far as practicable to those adopted at the Sixth Meeting of the International Radio Consultative Committee (C.C.I.R.) in Geneva, 1951. Excerpts concerning symbols and terminology from Document No. 626-E of this Meeting are given on pages 2-7 of the report CRPL-F89, "Ionospheric Data," issued January 1952. Reprints of these pages are available upon request.

Beginning with data for January 1957, the symbols used are given in NBS Report 5033, "Summary of Changes in Ionospheric Vertical Soundings, Observing and Scaling Procedures - Effective 1 January 1957," which draws upon the First Report of the Special Committee on World-Wide Ionospheric Soundings (URSI/AGI), Brussels, Sept. 2, 1956. A list of these symbols is available upon request.

In the Second Report of the Special Committee on World-Wide Ionospheric Soundings of the URSI/AGI Committee, May 1957, a new descriptive letter was introduced:

- M Measurement questionable because the ordinary and extraordinary components are not distinguishable.

There was an expansion in meaning of the following:

- Z (1) (qualifying letter) Measurement deduced from the third magnetoionic component.
(2) (descriptive letter) Third magnetoionic component present.

Beginning with data for January 1945, median values are published wherever possible. Where averages are reported, they are, at any hour, the average for all the days during the month for which numerical data exist.

The following conventions are used in determining the medians for hours when no measured values are given because of equipment limitations and ionospheric irregularities. Symbols used are those given above.

- a. For all ionospheric characteristics:

Values missing because of A, C, F, H, L, N or R are omitted from the median count.

b. For critical frequencies and virtual heights:

Values of foF2 (and foE near sunrise and sunset) missing because of E are counted as equal to or less than the lower limit of the recorder. Values of h'F (and h'E near sunrise and sunset) missing for this reason are counted usually as equal to or greater than the median. Other characteristics missing because of E are omitted from the median count.

Values missing because of G are counted:

1. For foF2, as equal to or less than foF1.
2. For h'F2, as equal to or greater than the median.

The symbol W is included in the median count only when it replaces a height characteristic; the descriptive symbol D, only when it replaces a frequency characteristic.

Values missing for any other reason are omitted from the median count.

c. For MUF factor (M-factors):

Values missing because of G or W are counted as equal to or less than the median.

Values missing for any other reason are omitted from the median count.

d. For sporadic E (Es):

Values of fEs missing because of E or G are counted as equal to or less than the median foE, or equal to or less than the lower frequency limit of the recorder.

B for fEs is counted on the low side when there is a numerical value of a higher layer characteristic; otherwise it is omitted from the median count.

S for fEs is counted on the low side at night; during the day it is omitted from the median count (beginning with data for November 1957).

Values of fEs missing for any other reason, and values of h'Es missing for any reason at all are omitted from the median count.

Beginning with CRPL-F188, Part A, issued April 1960, the count is given for foF2 in the tables of medians. It is regretted that space limitations prevent including detailed counts for other characteristics.

WORLD - WIDE SOURCES OF IONOSPHERIC DATA

The ionospheric data given here in tables 1 to 72 and figures 1 to 144 were assembled by the Central Radio Propagation Laboratory for analysis and correlation, incidental to CRPL prediction of radio propagation conditions. The data are median values unless otherwise indicated. The following are the sources of the data in this issue:

Republica Argentina, Ministerio de Marina:

Buenos Aires, Argentina

La Quiaca, Argentina

Tucuman, Argentina

Commonwealth of Australia, Ionospheric Prediction Service of the
Commonwealth Observatory:

Brisbane, Australia

Hobart, Tasmania

Townsville, Australia

Belgian Royal Meteorological Institute:

Lwiro (Central African Institute for Scientific Research)

Universidad Mayor de San Andres:

La Paz, Bolivia

Electronics Directorate of the Brazilian Navy:

Natal, Brazil

British Department of Scientific and Industrial Research, Radio
Research Board:

Ibadan, Nigeria (University College of Ibadan)

Port Lockroy

Singapore, British Malaya

Slough, England

Defence Research Board, Canada:

Alert, Canada

Meanook, Canada

Universidad de Concepcion:

Concepcion, Chile

Radio Wave Research Laboratories, National Taiwan University,

Taipeh, Formosa, China:

Formosa, China

Instituto Geofisico de Los Andes Colombianos:

Bogota, Colombia

General Direction of Posts and Telegraphs, Helsinki, Finland:
Numijarvi, Finland

The Finnish Academy of Sciences and Letters:
Sodankyla, Finland

Institute for Ionospheric Research, Lindau Uber Northeim, Hannover, Germany:
Lindau/Harz, Germany

Ionospheric Institute, Breisach, Germany:
Freiburg, Germany

Central Institute of Meteorology, Budapest, Hungary:
Budapest, Hungary

National Institute of Geophysics, City University, Rome, Italy:
Rome, Italy

Norwegian Defence Research Establishment, Kjeller per Lillestrom, Norway:
Tromso, Norway

Telecommunication Administration, Oslo, Norway:
Svalbard, Norway

Manila Observatory:
Baguio, P. I.

Research Institute of National Defence, Stockholm, Sweden:
Kiruna, Sweden
Upsala, Sweden

Royal Board of Swedish Telegraphs, Radio Department, Stockholm, Sweden:
Lulea, Sweden

Post, Telephone and Telegraph Administration, Berne, Switzerland:
Sottens, Switzerland

United States Army Signal Corps:
Adak, Alaska
Cape Canaveral, Florida
Thule, Greenland

National Bureau of Standards (Central Radio Propagation Laboratory):
Anchorage, Alaska
Byrd Station, Antarctica
Fairbanks (College), Alaska (Geophysical Institute of the
University of Alaska)
Huancayo, Peru (Insituto Geofisico de Huancayo)
Point Barrow, Alaska
Pole Station, Antarctica

TABULATIONS OF ELECTRON DENSITY DATA

Reduction of hourly ionospheric vertical soundings to electron density profiles has become a part of the systematic ionospheric data program of the Central Radio Propagation Laboratory, National Bureau of Standards. Scalings of ionograms for this purpose are being provided by ionosphere stations operated by CRPL and the U. S. Army Signal Corps. For the present, the hourly profile data from one CRPL station, Puerto Rico, are appearing in the monthly CRPL-F Reports, Part A. These data are in place of the standard ionogram reductions formerly provided by this Station. The very considerable task of scaling the ionograms for this purpose is being undertaken by T. R. Gilliland, Engineer in Charge, Puerto Rico Ionosphere Sounding Station; the computations are performed at the NBS Boulder Laboratories by a group headed by J. W. Wright. Basic conversion of virtual to true heights uses the well-known matrix method developed by K. G. Budden of the Cavendish Laboratory, Cambridge University, programmed for an IBM 704 computer.

The tabulations provide the following basic electron density profile data for each hour of each day of the month:

<u>Quantity</u>	<u>Units</u>	<u>Remarks</u>
Electron Density (N)	$\times 10^3 = \text{electrons/cm}^3$	Body of table; given at each 10 km of height.
NMAX	$\times 10^3 = \text{electrons/cm}^3$	Always the highest value of N at each hour. To maintain this rule, the electron density at the next 10 km increment above HMAX is always given as exactly equal to NMAX (unless HMAX coincides with a 10 km level).
QUALification	(Alphabetic)	A standard scaling letter qualifying the observation when necessary.
HMIN	Kilometers	The height of zero or very low electron density, obtained by linear extrapolation of the electron density vs. height curve.
SCAT	Kilometers	One half of the half-thickness of the parabola best fitting the upper portion of the F region profile. Approximates the scale height near the level HMAX.
HMAX	Kilometers	The height of maximum electron density, determined by fitting a parabola to the upper portion of the profile.
SHMAX	$\times 10^{10} = \text{electrons/cm}^2$ column.	Obtained by integration of the profile between the limits HMIN and HMAX.

Tabulations of the average electron densities each hour, at each 10 km level, for the quiet ionosphere, are also given. These averages include the profiles obtained when the magnetic character figure Kp is less than 4+. The number of profiles entering the average for each hour is given by CNT. The other parameters of the layer, HMIN, SCAT, HMAX, SHMAX, are averaged in a similar way.

Before the averaging process, the individual profiles are extrapolated above HMAX by a Chapman distribution of 100 km scale height. This assumed model seems to agree well with the few published measurements dealing with the topside profile of the F-region.* Extrapolation is necessary in order to calculate homogeneous averages near HMAX and the average profiles are, in fact, given up to 950 km. Also given are the average estimated integrated electron densities to infinity, SHINF (same units as SHMAX); this is an approximation to the total electron content in a column of the ionosphere.

*See Wright, J.W. "A Model of the F-Region Above HMAX F2" J.Geophys.Res. V.65 pp 185-191.

ELECTRON DENSITY

PUERTO RICO		60 W		2 FEB 1960	
TIME	0000 0100 0200 0300 0400 0500 0600 0700 0800 0900 1000 1100				
QUAL	A		A		A
HMIN	228 220 220 14 174 148			200 113 110 109 109	
SCAT	40.4 11.0 12.0 1.3 107 14.0			40.0 55.1 34.8 33.3 54.7	
HMAXF	312 229 360 742 431 420			324 305 312 302 319	
SHMAX	454 321 4 122 184 197			268 951 1737 2076 2252	
KM					
440			246		
430			245 246		
420			245 246		
410			243 244		
400			240 238		
390			235 228		
380			229 217		
370			223 202		
360			217 183		
350			208 161		
340			200 131		
330			190 104		
320	475		180 77.2	417	
310	474	565	168 51.4	405 1072 2031 1571 2413	2430
300	454 72.0	565	157 12.4	392 1070 2007 1571 2355	
290	406 71.0	51	410 145	365 1052 1945 2541 2253	
280	744 67.4	117	410 132	351 1017 1846 2465 2118	
270	620 60.4	446	399 120	283 953 1721 2339 1938	
260	428 48.0	247	375 10.7	225 893 1555 2177 1731	
250	466 134	214	340 97.2	182 805 1369 1960 1510	
240	112 100	107	275 5.0	131 704 1126 1704 1298	
230	6.4 7.4 4.6	171	76.2	90.4 608 893 1414 1076	
220		60.0	66.2	60.0 508 703 1078 904	
210				41.1 417 552 794 743	
200				324 439 608 608	
190				254 353 460 508	
180				198 36 362 425	
170				161 34 303 358	
160				131 192 254 301	
150				112 163 215 256	
140				103 143 185 217	
130				89.4 135 170 195	
120				75.0 124 154 182	
110				49.6 60.0 83.8	

ELECTRON DENSITY

PUERTO RICO		60 W		1 FEB 1960	
TIME	1200 1300 1400 1500 1600 1700 1800 1900 2000 2100 2200 2300				
QUAL	A		A		J
HMIN	110 110 110 103 109 103 199 191 187 118 261 224				
SCAT	53.1 63.2 71.0 64.2 71.0 64.8 59.3 46.2 59.2 54.0 49.8 54.8				
HMAXF	317 316 340 346 350 345 523 312 340 370 369 344				
SHMAX	2216 2400 2533 2331 2294 1942 1650 1090 887 705 595 575				
KM					
370			875		
360			875 906		
350			867 399		
340	2161 2033 1954 1846 1765			1027 845 873 794	
330	2294 2151 2018 1974 1843 1874			1027 805 820 792	
320	2289 2121 2002 1944 1821 1879 1928			1027 754 768 750	
310	2430 2256 2069 1987 1894 1777 1604 1516			998 688 679 754	
300	2420 2159 1986 1886 1824 1710 1600 1501			960 612 573 716	
290	2370 2103 1894 1795 1730 1614 1555 1446			910 529 437 663	
280	2372 1945 1766 1688 1617 1475 1376 1350			846 439 286 595	
270	2128 1843 1647 1555 1403 1374 1182 1232			768 349 150 508	
260	1952 1543 1500 1416 1356 1240 960 1096			686 262 64.2 407	
250	1756 1511 1350 1274 1222 1096 742 930			597 187	
240	1555 1341 1197 1135 1096 960 517 770			508 124	
230	1322 1126 1050 996 960 834 347 587			410 86.4	
220	1085 951 917 863 834 706 198 385			305 49.6	
210	898 804 794 747 716 565 112 240			198 12.4	
200	741 673 691 644 608 493 60.0 117			112	
190	617 563 601 546 516 403 4.5 49.6			57.7	
180	521 477 527 477 429 322				
170	442 403 446 417 358 256				
160	378 354 383 354 297 203				
150	322 310 328 313 248 166				
140	275 262 263 274 211 139				
130	237 227 246 234 183 120				
120	213 212 216 201 161 108				
110	192 200 196 183 150 101				
	40.2 49.6 49.6 112 97.2 60.0				

ELECTRON DENSITY

PUERTO RICO		60 W		2 FEB 1960	
TIME	0000 0100 0200 0300 0400 0500 0600 0700 0800 0900 1000 1100				
QUAL	A		A		A
HMIN	227 227 230 228 210 194 191 239 110 110 109				
SCAT	49.5 46.7 40.5 40.1 41.8 72.5 50.1 40.8 43.7 33.7 48.8				
HMAXF	336 334 332 324 301 370 341 320 280 305 295				
SHMAX	444 372 313 337 232 344 241 281 378 1614 1808				
KM					
380			329		
370			329		
360			327		
350			323 286		
340	670 574 557			315 296	
330	668 572 556 599			302 283 532	
320	653 561 541 597			288 276 532	
310	624 535 504 580			271 264 524	
300	583 498 461 542 417 251 247 500			1918 2294	
290	526 446 398 488 410 229 226 465 1252 1885 2288				
280	452 382 310 417 390 205 202 403 1252 1819 2240				
270	366 305 219 335 362 179 175 318 1218 1719 2142				
260	269 226 135 240 316 155 148 219 1190 1594 2002				
250	161 143 67.2 135 252 129 123 112 1109 1418 1807				
240	76.7 75.7 12.4 66.2 174 104 97.2 12.4 996 1213 1581				
230	41.0 44.5 12.4 97.2 80.9 75.9 85.3 584 1323				
220				679 777 1025	
210				516 608 794	
200				389 477 604	
190				286 381 484	
180				219 302 389	
170				170 240 319	
160				138 198 268	
150				117 163 229	
140				105 142 198	
130				93.3 136 178	
120				79.4 131 167	
110				12.4 49.6 97.2	

ELECTRON DENSITY

PUERTO RICO				60 W				2 FEB 1960				
TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	A				A				A			
HMIN	110	109					229	186	188	210	258	238
SCAT	59.9	62.3					67.0	59.2	65.0	74.4	46.1	48.4
HMAXF	327	342					360	349	370	426	391	366
SHMAX	2072	2257					1824	1323	1012	978	667	674
KM												
430										906		
420										905		
410										896		
400										880	928	
390										851	928	
380										817	917	
370							2080	1027	777	885	960	
360							2080	1020	733	834	956	
350		2032					2069	1500	1000	682	762	933
340		2031					2035	1493	965	621	679	888
330	1969	2012					1978	1464	924	550	579	825
320	1961	1967					1897	1403	875	477	477	740
310	1927	1894					1786	1327	810	397	375	643
300	1853	1786					1669	1240	741	321	262	540
290	1761	1669					1417	1136	666	245	165	428
280	1652	1530					1341	1019	588	182	97.2	310
270	1522	1349					1155	887	508	135	55.9	179
260	1383	1247					932	754	424	99.8	12.4	101
250	1240	1130					643	622	342	72.2		55.3
240	1084	997					246	498	262	51.6		12.4
230	942	875					17.4	369	183	13.5		
220	815	754					254	127				
210	709	662						143	80.9			
200	620	578						74.7	51.2			
190	540	504						28.2	12.4			
180	468	436										
170	402	375										
160	347	323										
150	300	278										
140	257	237										
130	223	205										
120	205	189										
110	49.6	112										

ELECTRON DENSITY

PUERTO RICO				60 W				5 FEB 1960				
TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL												
HMIN	238	227	211	199	186	171	158	140	109	110	8	
SCAT	42.0	39.8	37.1	34.1	31.1	27.8	24.1	19.4	44.7	45.7	51.8	
HMAXF	339	340	311	281	240	197	160	121	281	292	306	
SHMAX	440	443	426	392	316	199	152	80	366	1353	1769	
KM												
400						159						
390						168						
380						166						
370						177	194					
360						176	193					
350						167	189					
340	745	754			160	161	122					
330	737	741			77	156	171	492				
320	705	706	248		77	137	158	492				
310	654	648	364		77	127	142	487			2044	
300	586	587	46		767	106	121	474		1801	2037	
290	497	465	796		10	130	7	451	1215	1800	1949	
280	395	362	710		77	7	7	420	1212	1771	1917	
270	286	240	577	60	247	61.6	61.6	375	1102	1598	1786	
260	161	143	417	10	77	41.7	44.3	324	1121	1380	1623	
250	77.3	77.7	740	51	119	12.4	11.9	255	1042	1426	1446	
240	11.2	55.3	67.2	477	702			189	210	1215	1262	
230	18.1	75.6	324	179				127	754	970	1050	
220		161	168					83.8	608	754	954	
210		75.7	106					51.2	462	599	659	
200		12.4	60.0					12.4	215	477	577	
190			12.4						248	370	466	
180									179	305	371	
170									136	251	310	
160									107	210	262	
150									96.1	179	226	
140									90.5	157	196	
130									85.7	142	177	
120									77.4	125	167	
110									40.5	55.3	97.1	

ELECTRON DENSITY

	PUERTO RICO				60 W				5 FEB 1960			
TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL												
HMIN	A	108	110	110	111	111	218	170	164	229	245	218
SCAT		71.1	76.8	69.3	63.0	62.5	63.8	66.8	57.8	60.5	57.7	58.1
HMAXF		356	362	351	360	350	345	342	360	374	375	366
SHMAX		2535	2516	2245	2266	2178	1864	1487	1076	940	797	775
KM												
390										1096		
380										1094	1071	
370			2000		2032				1215	1080	1073	949
360		2161	2000	1907	2032	2227			1215	1050	1052	947
350		2156	1938	1907	2018	2227	2394	1669	1200	1004	1015	930
340		2132	1959	1895	1973	2212	2280	1668	1165	946	960	895
330		2086	1914	1863	1913	2169	2260	1676	110	875	845	648
320		2018	1844	1811	1811	1909	2102	1624	1032	786	794	72
310		1932	1676	1730	1636	1994	2112	1574	740	684	679	710
300		1823	1676	1636	1558	1763	2004	1501	551	581	552	633
290		1681	1555	1529	1429	1511	1764	1317	754	469	417	540
280		1540	1438	1410	1290	1585	1767	1312	661	352	377	440
270		1387	1172	1287	1147	1541	1476	1177	365	240	171	347
260		1240	1198	1151	1004	1070	1110	1078	466	150	87.0	352
250		1065	1088	1033	873	705	675	864	377	31.7	42.4	166
240		926	969	923	767	706	677	693	286	51.7		93.5
230		810	854	821	661	592	181	497	104	6.5		56.5
220		705	745	728	573	470	20.2	286	127			12.4
210		613	642	643	507	381		112	56.7			
200		535	540	558	441	310		12.4	12.4			
190		464	454	477	307	252						
180		401	381	389	307	205						
170		346	322	324	275	169						
160		297	272	273	230	142						
150		252	232	230	195	122						
140		198	198	196	170	110						
130		178	180	176	155	105						
120		163	179	164	146	90.2						
110		148	147.6	140.2								

ELECTRON DENSITY

	PUERTO RICO				60 W				6 FEB 1960			
TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL												
HMIN	238	239	216	210	218	251	188	189	109	110		109
SCAT	59.8	41.7	58.4	52.2	54.6	72.1	57.1	69.6	54.5	46.4	55.3	
HMAXF	368	334	331	350	345	392	379	317	304	391		315
SHMAX	599	497	434	445	392	458	559	455	1056	1864		2289
KM												
400						484						
390						483						
380						477						
370	834					467						
360	829			582		451						
350				582	516	431						
340	768	906	573	577	514	407	492					
330	716	905	573	561	505	378	489					
320	647	882	568	534	487	342	477	643				2500
310	564	834	554	497	459	290	456	637	1316	2161		2495
300	469	759	520	445	425	248	429	619	1314	2158		2454
290	362	652	499	395	380	194	389	587	1294	2117		2373
280	262	508	401	335	326	143	338	543	1252	2032		2246
270	161	324	410	268	266	87.4	246	484	1188	1886		2083
260	97.2	150	346	207	205	47.5	219	411	1104	1694		1881
250	55.0	71.4	274	143	147			156	330	992	1446	1645
240	12.4	12.4	188	97.2	94.7			97.2	251	852	1212	1407
230			97.2	64.4	55.5			55.7	179	693	993	1123
220			40.2	42.5	12.4			11.4	118	540	776	960
210									75.8	389	608	794
200									47.8	269	468	658
190									7.1	179	362	551
180												462
170										123	290	396
160										95.9	229	336
150										87.0	186	324
140										81.6	155	275
130										78.2	134	235
120										74.8	123	206
110										71.4	117	188
										40.2	45.6	97.2

ELECTRON DENSITY

	PUERTO RICO				60 W				7 FEB 1960			
TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL			S				A					
HMIN	110	109	109	108	109	111	219	216	199	201	215	218
SCAT	55.3	62.2	70.1	63.4	65.4	62.7	51.7	54.0	53.4	61.0	47.7	55.2
HMAXF	314	328	345	330	338	336	332	320	333	347	338	341
SHMAXF	1923	2113	2272	2050	1891	1728	1303	1076	910	896	666	676
KM												
350			1969							1061		917
330			1966	2032	1786	1754	1876		1191	1057	982	917
310		2063	1966	2032	1779	1752	1876	1555	1190	1039	975	907
320	2032	2056	1906	2020	1752	1777	1852	1553	1174	1007	946	883
310	2029	2022	1846	1983	1704	1681	1792	1543	1137	960	895	843
300	1999	1962	1763	1921	1631	1611	1698	1504	1078	899	823	794
290	1935	1871	1669	1829	1548	1516	1570	1438	999	827	730	716
280	1833	1756	1545	1791	1434	1401	1404	1346	899	737	620	624
270	1704	1619	1405	1581	1302	1268	1209	1229	781	635	500	508
260	1545	1457	1252	1426	1178	1109	982	1077	658	525	362	399
250	1361	1275	1115	1252	1050	949	716	875	540	405	240	262
240	1126	1127	969	1006	707	786	389	608	417	286	135	152
230	1004	994	834	896	777	663	127	335	286	179	71.4	71.4
220	834	794	731	715	665	526	12.4	112	43	93.6	33.1	20.7
210	707	679	638	584	557	434			114	44	49.6	
200	608	568	560	477	467	358				12.4		
190	526	477	491	398	362	295						
180	460	410	426	335	286	240						
170	396	353	365	286	227	196						
160	335	302	310	245	179	161						
150	286	260	262	209	146	136						
140	244	219	227	177	130	117						
130	210	195	198	159	122	106						
120	188	185	187	151	116	97.2						
110	40.2	83.8	143	127	97.2							

ELECTRON DENSITY

	PUERTO RICO				60 W				8 FEB 1960			
TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL		A		A	A			A				
HMIN	110	110		110	110	110	219	199	207	238	233	222
SCAT	53.4	64.2		60.5	60.2	58.3	51.8	61.1	50.3	58.3	50.0	48.9
HMAXF	309	328		346	335	330	322	326	355	376	350	330
SHMAX	2027	2159		1948	1919	1976	1400	1273	709	797	677	528
KM												
380										1004		
370										1002		
360									939	986	1004	
350									937	955	1004	
340					1771				919	910	995	804
330		2048		1738	1934	2193	2048	1341	892	852	966	804
320		2040		1687	1907	2177	2047	1338	825	772	917	794
310	2294	2007		1602	1853	2129	2020	1318	754	679	850	765
300	2278	1950		1590	1771	2048	1956	1281	666	564	754	726
290	2223	1865		1381	1669	1926	1853	1223	568	466	643	668
280	2123	1763		1256	1526	1786	1714	1150	468	327	500	486
270	1989	1627		1122	1379	1613	1536	1060	362	209	348	489
260	1815	1475		991	1224	1410	1312	935	270	116	198	377
250	1607	1311		875	1050	1169	1050	794	190	60.0	101	255
240	1384	1159		764	888	943	754	634	127	12.4	49.6	121
230	1143	1004		674	731	743	389	467	83.8			57.4
220	935	854		601	608	573	494.6	286	52.7			
210	754	716		540	503	446		112	17.5			
200	615	608		491	417	357		12.4				
190	503	516		440	345	286						
180	417	439		386	289	226						
170	358	373		332	243	185						
160	310	318		282	204	155						
150	265	272		237	175	132						
140	229	232		198	154	117						
130	204	202		176	139	107						
120	186	185		161	130	99.9						
110	49.6	49.6		40.2	12.4	12.4						

ELECTRON DENSITY											
PUERTO RICO				60 W				9 FEB 1960			
TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000 1100
QUAL											
HMIN	220	209	208	186	215	260	211	215	109	110	108 109
SCAT	43.2	37.7	38.0	28.4	93.0	63.6	61.9	44.4	46.6	48.1	48.3 51.9
HMAXF	340	304	278	241	341	394	358	317	279	294	291 298
SHMAX	550	455	595	120	157	127	165	298	932	1556	1734 1950
KM											
400					127	143					
390					127	143					
380					127	142					
370					125	138					
360					123	133	184				
350	854				121	126	183				
340	854				117	117	180				
330	844				113	106	174				
320	812				108	94.1	167 492				
310	754 875				102	80.9	159 489				
300	679 872				96.3	68.1	145 475	2048	2227	2294	
290	590 844				88.8	55.9	129 446	2045	2226	2279	
280	482 788 875				81.1	44.9	112 410	1354	2006	2197 2222	
270	373 695 866				73.0	25.6	94.4	355	1341	1924 2120 2119	
260	262 573 826						64.6	286	1296	1798 1994 1980	
250	161 417 754	335	55.8				64.3	205	1220	1626 1823 1786	
240	97.2	253	643	335	46.9		52.3	127	1122	1400 1604 1572	
230	49.6	112	446	323	35.4		47.4	71.4	960	1114 1341 1341	
220	60.0	161	291	12.4		22.0	33.1	739	875	1063 1121	
210	4.5	40.2	233					531	668	819 901	
200			119					380	508	628 716	
190			42.8					271	401	489 560	
180								202	323	397 446	
170								156	262	331 375	
160								127	219	283 321	
150								108	183	244 276	
140								95.7	158	211 240	
130								89.8	141	184 209	
120								83.8	132	168 189	
110								40.2	49.6	71.4 71.4	

ELECTRON DENSITY											
PUERTO RICO				60 W				9 FEB 1960			
TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200 2300
QUAL											
HMIN	109	109				110	201	188	188	199	208 209
SCAT	60.2	64.5				56.7	46.3	51.8	58.7	55.8	43.4 47.6
HMAXF	303	325				333	311	325	348	341	327 330
SHMAX	1781	1949				1823	1155	1018	908	764	547 467
KM											
350									1061	960	
340									1056	960	
330			1801			2032			1036	951	875 688
320			1798			2030			1367	1036	875 688
310	1846	1776				2005	1846	1364	1000	926	869 681
300	1845	1733				1949	1845	1338	949	885	842 658
290	1825	1669				1857	1818	1286	884	830	789 620
280	1780	1579				1742	1748	1207	805	759	716 567
270	1710	1472				1589	1632	1108	716	679	618 498
260	1610	1341				1407	1479	981	608	581	508 417
250	1491	1207				1205	1275	834	508	477	380 335
240	1341	1075				987	1032	695	409	371	262 240
230	1195	938				794	716	540	298	262	161 157
220	1050	810				620	389	371	210	173	97.2 94.2
210	875	703				486	189	219	137	97.2	55.3 52.8
200	716	608				389	71.4	120	86.3	54.8	12.4 6.1
190	585	530				320			64.1	53.8	5.5
180	477	458				262			12.4	12.4	
170	384	394				182					
160	326	340				151					
150	282	297				127					
140	245	258				112					
130	212	219				104					
120	190	192				93.5					
110	112	127				12.4					

ELECTRON DENSITY											
PUERTO RICO				60 W				10 FEB 1960			
TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000 1100
QUAL											
HMIN	249	229	240	216	196	213	225	260	110	109	109 108
SCAT	46.3	44.8	41.8	34.7	55.3	109	66.2	49.6	43.7	45.2	44.3 55.2
HMAXF	349	334	320	308	298	415	374	350	285	293	299 300
SHMAX	412	420	311	242	253	342	224	298	811	1370	1766 2197
KM											
420						240					
410						240					
400						239					
390						237					
380						234	240				
370						230	240				
360						225	237	477			
350	670					219	232	477			
340	663	679				211	224	472			
330	643	677	590			203	213	458			
320	604	662	590			195	199	434			
310	551	628	582	477		184	183	404			
300	477	580	555	471	362	173	165	356	1815	2379	2571
290	380	513	516	446	360	161	143	291	1179	1813	2355 2549
280	271	432	452	401	352	146	123	211	1176	1775	2271 2484
270	161	335	362	335	338	130	102	112	1146	1693	2125 2373
260	76.1	229	240	262	318	114	80.6	1076	1567	1924 2231	
250	12.4	121	106	183	294	97.2	60.0	993	1396	1669 2032	
240		56.4		112	262	78.7	44.4	853	1170	1341 1786	
230		5.2		58.5	214	60.0	15.8	688	949	1096 1510	
220				23.3	155	41.3		519	754	834 1221	
210					87.5			389	581	629 960	
200					40.2			266	462	490 716	
190								219	373	399 552	
180								173	306	332 446	
170								137	254	281 374	
160								112	212	240 321	
150								97.2	179	206 275	
140								91.5	156	179 238	
130								85.9	141	160 210	
120								76.9	132	151 191	
110								12.4	97.2	127 161	

ELECTRON DENSITY											
	PUERTO RICO				60 W				10 FEB 1960		
TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200 2300
QUAL											
HMIN	108	109	109	109	110	109	199	220	198	197	230 210
SCAT	65.1	67.6	64.2	69.8	63.2	65.2	58.3	58.9	45.2	59.3	52.7 49.1
HMAXF	317	329	329	329	326	339	333	345	318	339	357 317
SHMAX	2117	2231	1996	1986	1733	1738	1282	1208	787	652	527 388
KM											
360											735
350								1555			732
340										804	716
330			2096	1907	1846	1727	1718	1611	1530	798	686
320	2048	2087	1897	1838	1723	1690	1592	1485	1215	782	643 608
310	2042	2056	1864	1811	1699	1641	1549	1416	1205	754	588 605
300	2014	2001	1808	1765	1654	1572	1479	1334	1165	716	512 590
290	1962	1924	1724	1701	1588	1476	1392	1220	1096	664	422 562
280	1883	1824	1623	1615	1495	1367	1280	1071	995	597	326 524
270	1786	1703	1499	1515	1383	1240	1143	887	868	516	219 468
260	1669	1555	1354	1392	1256	1130	988	679	716	426	131 389
250	1511	1384	1200	1292	1096	977	808	477	555	335	80.5 286
240	1341	1196	1036	1086	950	815	608	262	401	245	47.7 179
230	1184	1004	875	928	794	666	406	127	249	161	97.2
220	1017	849	738	778	661	532	219	12.4	127	92.8	52.8
210	845	704	622	643	540	417	83.8		64.9	55.6	
200	695	585	527	534	446	320	124		12.4	18.1	
190	573	493	452	441	375	245					
180	477	425	393	371	316	191					
170	404	370	344	317	267	149					
160	345	325	300	272	228	116					
150	297	286	260	235	194	103					
140	256	248	224	204	166	95.3					
130	219	217	196	179	145	91.1					
120	194	193	180	165	134	86.0					
110	179	143	60.0	60.0	83.8	60.0					

ELECTRON DENSITY

[illegible]

ELECTRON DENSITY

	PUERTO RICO				60 W				12 FEB 1960			
TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL				S				C	C	C	C	C
HMIN	108	109		108	109	109						
SCAT	55.1	52.3	66.4	76.0	73.4	70.5						
HMAXF	296	280	318	324	336	347						
SHMAX	1538	1364	1585	1547	1582	1670						
KM												
350												1583
340						1367	1580					
330					1341	1365	1562					
320			1446	1340	1352	1527						
310			1441	1329	1326	1477						
300	1669		1420	1307	1287	1407						
290	1663	1555	1383	1273	1235	1323						
280	1632	1543	1327	1225	1166	1220						
270	1573	1502	1253	1168	1096	1116						
260	1483	1429	1168	1102	1004	976						
250	1371	1324	1071	1019	912	834						
240	1240	1201	960	917	811	687						
230	1096	1058	851	821	708	563						
220	933	898	746	724	608	446						
210	777	742	652	628	522	354						
200	643	608	569	529	446	283						
190	540	508	496	439	375	229						
180	454	429	427	368	316	186						
170	385	369	362	310	268	149						
160	329	321	310	262	229	121						
150	286	279	270	225	198	105						
140	247	242	237	189	173	95.5						
130	213	212	210	164	148	90.9						
120	191	190	189	152	133	86.2						
110	161	143	143	127	97.2	49.6						

ELECTRON DENSITY

	PUERTO RICO					60 W					13 FEB 1960				
TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100			
OUAL		C	C	C	C	C	C	C	C	C					
HMIN											110	110	109		
SCAT											33.4	42.5	48.9		
HMAXF											262	281	280		
SHMAX											934	1341	1428		
KM															
290											1907	1771			
280											1907	1771			
270										1555	1877	1752			
260										1554	1795	1697			
250										1507	1658	1601			
240										1385	1470	1476			
230										1208	1240	1307			
220										960	960	1122			
210										754	716	932			
200										559	540	754			
190										426	429	589			
180										335	352	459			
170										270	294	373			
160										224	250	319			
150										188	213	278			
140										161	185	242			
130										142	163	212			
120										131	151	191			
110										12.4	60.0	127			

ELECTRON DENSITY

	PUERTO RICO				60 W				13 FEB 1960			
TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
OUAL			A	A		A						
HMIN	108			111	109	112	218	207	199	198	238	208
SCAT	48.6			55.8	62.7	57.4	47.1	57.0	53.2	60.7	49.5	54.1
HMAX	293			320	323	330	320	317	343	354	354	330
SHMAX	1454			1609	1700	1700	1149	1091	808	715	498	438
KM												
360									1004	844	716	
350									1003	843	715	
340						1846	1861		989	833	701	590
330				1683	1727	1846	1861	1500	955	812	673	590
320				1683	1725	1831	1861	1500	955	778	630	585
310				1669	1708	1789	1840	1494	901	733	573	570
300	1697			1629	1668	1716	1775	1466	837	679	508	544
290	1696			1561	1606	1616	1676	1415	754	608	417	508
280	1666			1460	1520	1489	1530	1341	664	524	328	464
270	1601			1341	1416	1341	1324	1248	573	437	231	403
260	1495			1201	1287	1155	1074	1127	477	345	143	335
250	1359			1050	1130	975	754	960	384	256	71.6	267
240	1201			892	972	806	446	737	298	171	22.3	191
230	1041			754	804	655	143	508	208	115		118
220	879			643	654	522	26.8	262	127	76.6		62.8
210	729			548	540	423		71.6	67.6	46.6		12.4
200	608			470	446	349			12.4	12.4		
190	502			401	377	289						
180	423			339	317	240						
170	362			290	262	198						
160	313			252	222	165						
150	269			219	186	138						
140	229			184	157	120						
130	198			161	140	108						
120	187			146	130	98.0						
110	143				71.6							

ELECTRON DENSITY

	PUERTO RICO						60 W				14 FEB 1960			
TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	A	
QUAL														
HMIN	245	241	223	216	208	205	220	220	113	109	108	109	109	
SCAT	42.1	39.0	59.9	58.0	45.6	74.4	46.3	52.0	43.7	46.3	41.4	43.3	43.3	
HMAXF	348	330	347	335	298	388	344	309	288	296	288	299	299	
SXMAX	341	280	407	312	207	309	251	282	798	1377	1640	1925	1925	
KM														
390						286								
380						285								
370						281								
360						275								
350	573		524			267	362							
340	568	516	522	410		255	361							
330	546	516	513	409		242	353							
320	508	508	497	403		226	337							
310	454	482	473	390		207	312	446						
300	381	440	444	371	348	185	278	443						
290	301	384	406	348	346	163	240	432	1061	1812	2361	2686		
280	219	310	354	317	335	141	198	412	1051	1766	2340	2583		
270	136	225	286	276	316	119	157	386	1014	1678	2251	2410		
260	75.0	137	219	227	290	99.9	119	349	948	1555	2090	2161		
250	33.1	63.8	138	169	252	81.7	83.8	295	855	1376	1864	1786		
240			74.4	112	203	65.3	57.7	219	741	1125	1582	1426		
230			41.7	64.2	139	51.0	40.2	112	623	902	1259	1096		
220				25.6	76.3	40.2			501	700	960	794		
HMAX					21.2	12.4			403	540	704	592		
200									323	436	532	477		
190									258	353	417	402		
180									208	292	348	348		
170									167	240	296	305		
160									136	202	255	262		
150									114	172	222	217		
140									98.3	151	192	181		
130									90.3	139	168	161		
120									79.8	131	152	152		
110										83.8	97.2	122		

ELECTRON DENSITY

	PUERTO RICO					60 W					14 FEB 1960				
TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300			
OUAL		A	A	A	A	A	A	A	A	A					
HMIN							199				208	199	181		
SCAT							48.8				46.2	40.6	64.0		
HMAX F							322				311	296	349		
SHMAX							1281				539	331	304		
KM															
350															310
340															309
330															303
320							1861								303
310							1860			844					294
300							1835			844					281
290							1766			832	573				262
280							1657			801	570	242			220
270							1520			748	552				198
260							1341			679	514				174
250							1143			583	461				174
240							929			477	396				151
230							679			362	317				128
220							417			256	230				107
210							191			127	136				87.8
200							83.8			26.8	68.8	70.0			
190							12.4				12.4	54.4			36.8

ELECTRON DENSITY

ELECTRON DENSITY

PUERTO RICO 60 W 15 FEB 1960										
TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900
QUAL										
HMIN	288	258	232	219	198	182	196	230	111	111
SCAT	51.4	48.5	35.8	26.6	24.1	67.3	82.8	51.3	47.4	53.6
HMAXF	402	357	315	274	260	327	356	319	282	291
SHMAX	248	266	210	176	86	160	151	207	719	1251
KM										
410	348									
400	348									
390	343									
380	332									
370	314									
360	290	410					135			
350	259	408					135			
340	219	397					134			
330	179	377				179	132			
320	136	349	424			179	129	323		
310	88.9	312	422			176	124	320		
300	54.0	262	405			171	118	311		
290	12.4	204	370			164	112	296		
280		143	320	516		153	105	278		
270		78.1	255	514	219	142	97.7	249		
260		22.3	167	482	219	127	89.1	209		
250			89.8	417	212	112	80.4	161		
240			46.5	286	193	94.5	71.4	107		
230				112	161	78.8	61.3			
220				12.4	112	64.5	51.9			
210					60.0	52.2	41.5			
200					12.4	42.1	12.4			
190						19.9				
180										
170										
160										
150										
140										
130										
120										
110										

PUERTO RICO 60 W 15 FEB 1960										
TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100
QUAL										
HMIN	110	109	104	109	107	110	109	185	176	185
SCAT	51.3	50.5	56.6	64.2	61.2	56.2	47.2	49.2	48.0	49.2
HMAXF	298	313	321	327	327	310	306	301	316	311
SHMAX	1842	1910	2071	135	1794	1537	1168	845	593	431
KM										
340										
330										
320										
310										
300	2260	2191	2154	2031	1730	1770	1898	1240	850	635
290	2246	2114	2088	1948	166	1726	1850	1223	804	613
280	2189	1990	192	1836	1554	1652	1760	1181	754	579
270	2090	1830	1761	1702	1434	1555	1626	1114	671	532
260	1947	1621	1555	1543	1259	1427	1457	1020	573	464
250	1764	1381	1341	1358	1131	1268	1250	895	467	384
240	1524	1143	1034	1182	881	1078	875	754	355	295
230	1240	917	875	951	834	875	846	597	240	203
220	1004	736	712	794	695	679	108	417	143	121
210	772	597	589	643	573	527	83.4	228	71.4	71.4
200	573	499	494	50	477	403	1.4	97.1	27.4	34.0
190	456	427	421	417	389	310		12.4		
180	381	373	362	343	318	243				
170	329	325	317	291	259	198				
160	290	290	277	245	215	165				
150	254	254	240	212	183	140				
140	219	224	204	179	155	122				
130	194	203	178	159	139	109				
120	183	187	168	150	131	98.5				
110	49.4	97.2	83.4	112	97.2	12.4				

ELECTRON DENSITY

ELECTRON DENSITY

PUERTO RICO 60 W 16 FEB 1960										
TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900
QUAL										
HMIN	229	202	219	204	196	196	222	189	110	109
SCAT	38.9	42.4	38.3	25.9	85.4	79.5	54.5	51.0	43.7	46.0
HMAXF	318	292	301	260	363	367	324	296	262	294
SHMAX	334	268	224	140	196	137	91	223	545	1079
KM										
370					170	123				
360					170	123				
350					169	122				
340					167	119				
330					164	116	127			
320	625				159	112	127			
310	619		439		153	106	125			
300	593	477	439		147	99.9	121	329		
290	546	477	429		140	92.7	115	378		
280	477	468	405		130	84.9	106	321		
270	389	446	367	410	120	76.5	97.2	308		
260	293	414	310	410	108	68.1	83.8	291		
250	169	362	229	396	96.6	60.0	69.2	266		
240	71.4	290	143	351	84.6	51.9	53.3	227		
230	12.4	209	68.2	271	72.2	45.2	32.2	179		
220		122	12.4	143	59.3	37.0		132		
210		57.4		49.6	46.0	21.6		83.8		
200					16.6	6.2		49.6		
190								6.7		
180										
170										
160										
150										
140										
130										
120										
110										

PUERTO RICO 60 W 16 FEB 1960										
TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100
QUAL										
HMIN	109	108	109	108	107	110	199	209	198	217
SCAT	59.2	63.7	62.4	61.2	61.4	51.1	42.4	45.4	43.3	53.7
HMAXF	309	321	331	325	324	307	304	307	311	334
SHMAX	1766	1865	2044	1975	1861	1497	962	749	599	522
KM										
350										
340										
330										
320										
310	1786	1773	1915	1969	1866	1844	1583	1240	960	723
300	1774	1739	1850	1916	1819	1837	1579	1232	944	661
290	1738	1683	1757	1835	1740	1796	1540	1196	900	613
280	1675	1601	1639	1724	1645	1719	1459	1130	874	546
270	1583	1506	1501	1591	1524	1603	1341	1034	745	456
260	1469	1384	1351	1433	1376	1456	1168	894	643	362
250	1341	1240	1184	1240	1215	1282	960	731	517	240
240	1201	1104	1004	1075	1039	1074	754	540	173	154
230	1063	960	857	887	875	875	508	335	240	79.4
220	924	814	727	729	725	679	286	112	127	31.0
210	794	685	622	595	590	508	112	12.4	60.0	73.5
200	671	573	535	489	477	389	17.4		12.4	47.6
190	549	487	463	413	398	310				7.3
180	446	417	400	362	335	244				
170	371	362	346	320	282	198				
160	316	315	300	280	237	167				
150	273	276	260	240	200	141				
140	233	240	223	204	172	121				
130	201	209	188	172	149	108				
120	185	190	170	154	135	98.3				
110	71.4	161	127	127	103	12.4				

ELECTRON DENSITY

PUERTO RICO		60 W										17 FEB 1960	
TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	
QUAL						F		S					
HMIN	245	243	223	232	188	205	187	199	111	109	107	107	
SCAT	52.5	39.3	54.9	43.2	30.6	67.3	61.8	44.7	45.0	51.9	46.8	59.4	
HMAXF	372	330	341	319	244	377	316	290	261	287	287	304	
SHMAX	353	270	301	300	146	227	153	213	568	1008	1373	1408	
KM													
380	477					224							
370	476					223							
360	471					221							
350	456		410			214							
340	432	508	410			205							
330	401	508	406			195							
320	362	500	395	548		183	179						
310	310	475	377	542		168	179						
300	252	436	354	521		152	176	355				1420	
290	198	374	322	487		136	171	355		1215	1786	1401	
280	143	296	282	436		118	164	350		1209	1775	1364	
270	93.7	206	232	355		102	154	336	834	1181	1725	1303	
260	58.7	112	179	240		86.3	142	315	834	1131	1632	1232	
250	29.4	49.6	123	118	403	71.4	128	283	821	1061	1506	1130	
240			71.4	54.1	401	59.7	112	240	787	960	1341	1022	
230			41.7		381	47.9	95.2	191	734	834	1109	903	
220					346	35.7	78.8	136	657	679	875	782	
210					262	12.4	62.3	74.7	540	553	679	671	
200					83.8		45.5	12.4	417	452	528	573	
190					20.7		12.4		310	369	427	487	
180									228	302	357	417	
170									168	247	304	355	
160									127	203	262	301	
150									106	167	227	257	
140									93.4	141	198	222	
130									85.7	126	170	186	
120									74.4	117	153	169	
110										71.4	127	143	

ELECTRON DENSITY

PUERTO RICO		60 W										17 FEB 1960	
TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
QUAL					A			A					
HMIN	109	108		109	109		109	199	199	209	204	228	198
SCAT	58.1	58.2	51.5	62.4	59.1	46.9	52.8	46.7	55.7	62.0	44.0	55.7	
HMAXF	320	324	313	331	342	315	317	304	331	362	345	350	
SHMAX	1759	2031	1901	2060	2027	1751	1489	1046	846	749	525	682	
KM													
370											875		
360											875	834	
350											867	814	834
340						2032							
330	1786	2128			2031	2011				1143	817	790	808
320	1786	2125	2193	2016	1761	2327	2144			1131	774	746	772
310	1773	2095	2152	1974	1876	2321	2134	1697	1101	721	679	725	
300	1733	2032	2159	1907	1761	2270	2087	1694	1050	656	602	668	
290	1669	1943	2086	1808	1627	2161	2000	1657	983	573	508	599	
280	1570	1824	1967	1689	1482	1998	1887	1582	899	477	412	521	
270	1466	1669	1812	1546	1317	1797	1717	1469	794	377	310	438	
260	1312	1466	1621	1376	1118	1555	1496	1314	656	286	198	351	
250	1172	1240	1413	1186	949	1261	1240	1116	508	198	112	262	
240	1023	1050	1143	1004	794	1004	917	834	335	127	62.8	186	
230	858	834	942	834	668	730	540	508	179	85.7	12.4	127	
220	716	679	754	691	564	540	286	253	79.9	55.6		81.4	
210	592	566	608	582	481	417	97.2	106	12.4	26.8		49.6	
200	497	481	503	497	413	315	12.4	12.4				12.4	
190	423	420	426	428	355	240							
180	369	373	362	369	302	202							
170	327	335	313	319	257	167							
160	291	302	269	276	219	140							
150	256	269	230	242	186	121							
140	223	234	201	215	159	106							
130	198	205	180	187	142	95.1							
120	184	189	170	168	133	88.8							
110	127	143	143	97.2	83.8	60.0							

ELECTRON DENSITY

PUERTO RICO		60 W										18 FEB 1960	
TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	
QUAL		J	A			A							
HMIN	222	199	249	221	235	198	196	197	110	109	105	108	
SCAT	44.9	47.6	44.1	40.4	48.3	64.1	57.7	50.1	50.8	49.3	48.9	53.2	
HMAXF	344	322	350	312	350	349	347	347	306	297	301	293	
SHMAX	529	505	428	364	401	457	461	619	1325	1717	1974	1889	
KM													
360			716		599								
350	794		716		599	508	565	834					
340	792		708		592	506	563	829					
330	775	764	679		573	497	553	809					
320	735	764	635	688	540	483	533	768					
310	679	751	573	688	494	461	509	716	1727		2500		
300	608	722	482	674	438	435	473	648	1720	2227	2500	2294	
290	524	679	378	638	370	402	423	559	1684	2216	2471	2292	
280	432	613	262	583	286	362	362	459	1605	2161	2390	2259	
270	335	528	143	499	198	317	302	362	1506	2061	2253	2186	
260	240	424	66.1	377	112	268	240	275	1370	1918	2071	2067	
250	139	310	12.4	232	66.1	219	182	198	1191	1723	1829	1918	
240	83.8	206		112	32.2	168	132	143	1004	1468	1555	1721	
230	45.4	127		54.0		122	94.9	100	778	1209	1240	1486	
220		78.4				79.3	67.4	68.8	573	960	938	1177	
210		49.6				49.6	46.9	46.7	398	703	726	891	
200		6.9				12.4	16.5	12.4	286	524	573	679	
190									211	409	463	540	
180									161	325	383	437	
170									125	258	321	370	
160									102	207	274	319	
150									94.1	175	236	278	
140									90.1	146	209	240	
130									86.1	127	177	212	
120									75.9	118	154	176	
110										12.4	97.2	134	127

ELECTRON DENSITY

PUERTO RICO				60 W				18 FEB 1960				
TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL				A	A	A	A	S			A	J
HMIN	107	108					189	189	189	208	267	217
SCAT	65.1	55.4					48.1	46.9	39.3	59.3	44.8	42.7
HMAXF	331	314					307	313	270	324	386	335
SHMAX	2440	2147					1295	1023	498	324	276	301
KM												
390											417	
380											415	
370											403	
360											380	
350											347	
340	2294										306	477
330	2293									424	257	475
320	2278	2361						1542		424	205	462
310	2235	2359						1540		418	152	435
300	2165	2325						1512		407	106	395
290	2064	2254						1466		389	71.4	343
280	1942	2141						1350	982	367	47.9	280
270	1786	1991						1213	982	339	12.4	215
260	1617	1805						1058	967	298		156
250	1466	1589						875	917	247		108
240	1240	1341						643	840	183		73.6
230	1083	1143						432	725	120		48.2
220	929	928						240	562	63.3		12.4
210	794	754						127	335	12.4		
200	679	608						66.8	143			
190	564	496						12.4	12.4	12.4		
180	464	410										
170	383	347										
160	327	300										
150	286	262										
140	251	230										
130	216	202										
120	192	188										
110	161	161										

	PUERTO RICO					60 W					19 FEB 1960				
TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100			
QUAL	A			A				A			A				
HMIN	214	219	208	200	198	215	197	209	112	109	107	108			
SCAT	47.1	42.8	44.6	19.2	48.4	65.6	52.9	40.2	42.5	48.4	53.7	45.6			
HMAX	33.2	311	309	249	281	350	324	282	254	265	293	292			
SHMAX	287	230	283	107	85	129	138	230	556	856	1366	1501			
KM															
360						143									
350						143									
340	432					142									
330	431					140	179								
320	425	403				136	179								
310	408	403	477			130	176								
300	382	398	473			122	170					1569	1907		
290	347	377	457		139	113	161	456				1568	1906		
280	300	352	429		139	101	148	454				1545	1874		
270	240	310	392		137	89.3	133	444		1143	1495	1796			
260	179	248	331		132	76.7	114	421	875	1140	1414	1669			
250	127	179	252	396	124	64.4	94.0	389	873	1116	1306	1498			
240	83.8	112	167	378	113	51.4	75.1	331	852	1067	1177	1301			
230	55.5	60.0	97.7	110	99.8	40.2	60.0	249	806	993	1023	1050			
220	26.8	4.5	57.4	87.6	12.4	47.4	143	735	895	857	834				
210			17.4	76.2	58.4		32.5	12.4	908	769	696	799			
200					12.4		7.4		538	630	566	554			
190									377	484	468	465			
180									250	362	389	398			
170									161	278	326	342			
160									120	219	271	296			
150									97.2	171	225	254			
140									84.9	140	188	215			
130									78.5	128	161	179			
120									72.6	117	151	169			
110										83.8	127	143			

PUERTO RICO				60 W				19 FEB 1960				
TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QIAL			A									
HMIN	109	108	110	111	109	110	714	700	194	196	216	252
SCAT	48.5	51.2	55.3	53.7	67.4	51.5	51.1	44.0	57.1	55.9	68.5	51.7
HMAX	294	308	314	316	325	315	322	301	312	314	404	377
SHMAX	1730	1919	2057	1762	2036	1576	1412	1048	916	526	460	354
KM												
410											446	
400											446	
390											442	
380											433	454
370											419	442
360											399	471
350											376	451
340						1907					348	422
330						1902		2128			316	384
320			2310	1907	1878	1907	2127		1240	697	281	335
310		2260	2305	1895	1834	1903	2099	1784	1240	697	244	283
300	2161	2247	2267	1858	1764	1869	010	1785	1227	686	310	224
290	2062	2192	2190	1769	1667	1779	1940	1758	1195	665	179	161
280	2086	2016	074	165	1567	1671	1767	1684	1143	632	157	151
270	1976	1967	1927	1515	1466	1555	1578	1566	1076	588	120	6845
260	1829	1766	1731	1356	1311	137	1341	1396	983	533	96.0	42.5
250	1631	1529	1512	1200	1156	1158	1004	1174	857	459	74.1	
240	1386	1259	1276	1050	1004	948	808	897	707	377	55.6	
230	1096	1035	1004	891	865	754	640	573	540	286	41.7	
220	875	834	804	734	716	584	60.0	262	362	212	17.4	
210	693	709	674	595	502	451		71.1	176	137		
200	551	568	529	489	400	362			60.0	49.6		
190	455	461	446	405	398	393						
180	385	394	379	335	323	240						
170	333	342	324	286	268	196						
160	290	297	277	244	224	161						
150	247	256	229	198	188	138						
140	206	219	194	161	157	101						
130	181	197	175	153	141	108						
120	170	185	165	146	132	101						
110	143	127	83.8									

	PUERTO RICO					60 W					20 FEB 1960				
TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100			
OVAL		S													A
HM1N	299	270	238	211	197	201	203	236	109	109	115	110			
SCAT	49.0	43.0	47.1	36.3	49.0	54.9	68.7	31.1	39.7	44.2	54.4	38.3			
HMAX	398	344	434	284	278	311	373	302	276	275	292	285			
SHMAX	338	296	357	296	217	191	196	213	778	1164	1475	1482			
KM															
410	508														
400	504														
390	490														
380	465						189								
370	432						189								
360	386						187								
350	324	557					183								
340	253	555	599				177								
330	179	542	598				169								
320	112	513	585			262	160								
310	57.2	470	559			262	148	508							
300	4.9	409	523		335	260	135	508			1727				
290		317	461	643	333	253	121	490			1700	2243			
280		198	370	641	324	242	107	446	1191	1669	1702	2237			
270	124.4	262	620	307	225	94.2	376	1185	1664	1647	2161				
260		153	577	286	206	82.5	278	1143	1623	1564	2001				
250		74.7	508	254	182	71.4	161	1069	1539	1463	1786				
240		21.7	389	214	150	62.4	49.6	944	1425	1319	1464				
230			219	161	114	52.8		794	1240	1143	1096				
220			83.8	106	75.9	43.5		643	1020	960	794				
210				60.0	44.5	21.4		498	767	754	618				
200				19.3				362	561	608	495				
190								262	417	477	410				
180								194	328	389	352				
170								143	262	322	310				
160								115	215	268	270				
150									96.2	179	225	233			
140									83.8	151	191	200			
130									78.6	130	164	178			
120									73.4	118	143	165			
110									12.4	83.8	49.8				

[illegible]

ELECTRON DENSITY

PUERTO RICO 60 W 71 FEB 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL												
HMIN	248	243	207	191	189	214	261	288	109	108	108	108
SCAT	44.8	39.7	38.3	24.5	44.4	77.7	65.2	34.3	38.1	40.4	56.2	53.1
HMAXF	355	331	296	239	274	373	385	276	263	266	306	300
SHMAX	338	338	317	173	82	139	127	217	636	845	1553	1926
KM												
390							152					
380							131	152				
370							131	150				
360		540					130	146				
350		538					128	140				
340		525	634				124	133				
330		496	634				119	125				
320		457	621				115	112				
310		401	589				109	97.2				
300		331	540	616			101	80.6		1683	2310	
290		253	455	612			93.0	63.6		1678	2310	
280		179	353	588		139	83.8	43.0	492	1648	2290	
270		112	240	545		179	74.2	20.8	488	1591	2229	
260	60.0	127	477			136	64.5		466	992	1232	1401
250	12.4	56.0	373			129	56.4		422	965	1189	1261
240			252	565	118	46.6			356	904	1109	1131
230			143	546	104	34.7			246	810	988	960
220			71.4	484	87.2	12.4			127	679	834	794
210			20.3	346	65.2			26.8	540	643	654	754
200				112	43.7				404	498	540	593
190					34.8				304	389	441	477
180									229	310	362	400
170									179	249	304	347
160									143	205	254	305
150									120	172	214	269
140									106	147	176	233
130									94.3	131	157	203
120									78.5	119	150	175
110									49.6	97.2	127	143

ELECTRON DENSITY

PUERTO RICO 60 W 21 FEB 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL												
HMIN	108	109	109	109	109							
SCAT	59.1	50.8	59.5	59.2	63.1							
HMAXF	312	304	323	316	321							
SHMAX	2040	1792	1869	1722	1792							
KM												
340												661
330												681
320	2161		1907	1786	1785							653
310	2160	2128	1882	1782	1772		1626	1569		939	735	632
300	2138	2125	1832	1755	1736		1625	1564		934	727	632
290	2084	2088	1753	1703	1677		1600	1528	1143	915	700	597
280	1998	2004	1659	1619	1592		1529	1456	1142	880	659	549
270	1894	1882	1522	1516	1492		1425	1354	1119	834	597	477
260	1743	1722	1366	1391	1367		1281	1211	1064	765	508	380
250	1555	1532	1189	1240	1223		1096	1024	980	679	404	262
240	1358	1305	1004	1076	1080		834	754	860	540	286	143
230	1173	1096	854	917	917		540	508	706	379	188	65.6
220	960	875	716	754	771		262	262	523	219	112	
210	774	679	598	630	632		40.2	104	335	91.3	63.7	
200	608	540	508	520	516				12.4	112	12.4	12.4
190	503	435	431	433	423							
180	421	369	367	367	350							
170	362	323	310	314	292							
160	306	283	262	270	246							
150	257	242	216	231	211							
140	219	212	188	197	179							
130	198	195	174	174	157							
120	187	185	165	162	145							
110	152	143	114	112	71.4							

ELECTRON DENSITY

PUERTO RICO 60 W 22 FEB 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL												
HMIN	211	214	199	188	210	208	248	216	110	109		109
SCAT	38.2	53.4	53.6	34.8	34.4	74.3	53.7	33.2	43.7	47.1		55.1
HMAXF	300	324	306	267	280	343	355	272	268	284		291
SHMAX	292	332	282	168	127	172	114	161	568	990		1494
KM												
360							156					
350							179	156				
340							179	153				
330		469					178	148				
320		468					175	139				
310	557	461	410				170	128				
300	557	444	409				164	115				
290	548	421	401			274	156	99.1			1669	
280	519	389	387			274	148	81.5			1651	
270	473	347	368	348		268	138	64.8	388	834	1211	1607
260	405	293	340	344		250	125	49.6	376	826	1157	1532
250	310	229	297	326	223	108	12.4		346	797	1074	1436
240	219	161	240	295	179	88.6			299	746	960	1307
230	117	97.2	174	248	124	67.2			224	673	834	1168
220	56.3	46.3	107	184	66.5	46.2			112	573	708	1016
210			55.6	117		7.7				454	580	853
200			4.9	60.0						343	471	695
190				12.4						246	379	554
180										173	306	437
170										124	248	362
160										101	198	310
150										88.8	164	270
140										81.6	138	234
130										77.3	124	204
120										73.1	117	186
110										40.2	83.8	127

ELECTRON DENSITY

PUERTO RICO 60 W 22 FEB 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL												
HMIN	109	108	109									
SCAT	54.4	52.1	52.7									
HMAXF	294	308	294									
SHMAX	1669	1684	1541									
KM												
340												599
330												599
320							1756		1640	1441		844
310			1876				1751	1741	1621	1415	1072	844
300	1907	1866	1786				1717	1731	1574	1369	1069	835
290	1904	1822	1782				1645	1693	1498	1300	1040	807
280	1874	1737	1755				1543	1620	1394	1219	981	754
270	1812	1626	1689				1409	1530	1262	1106	896	692
260	1712	1480	1589				1254	1413	1096	960	787	613
250	1588	1300	1466				1061	1266	875	794	663	518
240	1432	1123	1309				875	1086	643	595	528	417
230	1252	938	1143				716	917	362	389	362	316
220	1050	766	941				585	733	12.4	190	219	207
210	847	628	754				487	573				49.6
200	663	523	587				412	446				43.1
190	519	452	477				355	341				
180	426	396	397				306	262				
170	366	351	346				259	200				
160	324	310	305				219	169				
150	289	274	267				179	141				
140	255	240	231				155	122				
130	219	207	200				140	110				
120	192	188	187				132	102				
110	143	143	127				83.8	60.0				

ELECTRON DENSITY

PUERTO RICO											
60 W											
23 FEB 1960											
TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000 1100
QUAL	F										
HMIN	253	247	215	198	198	228	217	219	111	109	112 112
SCAT	58.7	53.4	31.1	39.0	35.8	55.8	71.3	36.2	43.8	51.6	46.1 48.4
HMAXF	387	358	286	276	267	342	361	286	269	293	297 282
SHMAX	481	484	348	248	142	152	209	209	631	1200	1542 1488
KM											
390	599										
380	597										
370	586										
360	566	697									
350	540	693									
340	501	677									
330	454	649									
320	396	608									
310	331	556									
300	266	482									
290	198	394	865								
280	127	286	857	50H							
270	71.4	167	809	505	304	116	127	439	896	1377	1857 1909
260	41.7	71.4	716	487	301	94.2	104	404	887	1304	1713 1840
250	20.3	551	456	288	71.4	82.0	350	853	1214	1501	1729
240			310	404	264	48.7	60.0	251	801	1069	1240 1583
230			120	310	225	12.4	44.6	127	716	917	1004 1384
220			46.0	179	168		12.4		616	740	767 1168
210				83.8	104				500	586	595 917
200				20.7	25.6				389	466	469 699
190									298	378	384 508
180									224	310	324 405
170									169	258	278 332
160									131	216	234 283
150									108	182	198 243
140									95.5	155	169 209
130									90.3	139	155 190
120									85.2	131	146 173
110										60.0	

ELECTRON DENSITY

	PUERTO RICO					60 W					23 FEB 1960				
TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300			
QUAL	A														
HMIN	110	108	109	109	107	111	206	199	194	218	228	209			
SCAT	48.1	55.1	59.9	57.0	58.0	57.9	47.6	54.4	63.0	63.1	41.9	41.8			
HMAXF	308	308	420	322	315	309	314	327	303	372	335	303			
SHMAX	1776	1803	1896	1909	1727	1545	1012	1130	678	605	430	374			
KM															
380											679				
370											679				
360											673				
350											658				
340											634	726			
330											603	723			
320											562	704			
310	2128	2000	1909	1885	1918	1756	1553	1517	917	514	662	670			
300	2115	1989	1868	1836	1888	1746	1523	1460	917	454	602	669			
290	2057	1946	1801	1753	1829	1709	1459	1375	907	389	523	654			
280	1954	1865	1703	1648	1736	1642	1356	1268	886	321	427	619			
270	1812	1764	1585	1508	1621	1555	1224	1127	854	257	310	567			
260	1601	1619	1446	1350	1480	1446	1064	938	813	198	491				
250	1357	1446	1271	1163	1305	1303	875	716	754	140	107	389			
240	1131	1240	1096	971	1096	1136	630	477	667	89.0	57.5	262			
230	917	1050	917	794	875	960	417	300	540	55.1	12.4	149			
220	730	847	763	643	696	779	219	161	375	12.4		67.4			
210	596	679	636	540	551	608	49.6	83.8	179			12.4			
200	50H	547	540	461	434	446	12.4 60.0								
190	446	454	461	402	350	335									
180	407	389	401	355	286	251									
170	366	335	352	315	240	198									
160	318	290	307	276	201	161									
150	268	252	266	240	171	135									
140	219	219	225	202	150	118									
130	195	196	196	177	139	107									
120	184	185	183	165	131	99.4									
110	40.2	127	97.2	112	112										

ELECTRON DENSITY

PUERTO RICO											
60 W											
24 FEB 1960											
TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000 1100
QUAL	F										
HMIN	208	228	232	219	190	187	229	198	113	111	111 109
SCAT	55.1	50.6	42.6	40.2	26.3	97.8	70.6	46.0	46.7	65.6	46.9 51.3
HMAXF	336	340	318	300	237	358	374	297	273	305	295 289
SHMAX	326	269	249	255	88	165	135	243	695	1297	1452 1539
KM											
380											139
370											139
360											131 138
350											131 135
340	424	389									
330	423	385									
320	416	374	461								
310	401	355	457	492							
300	379	332	440	492	120	101	403				
290	352	296	410	485	115	89.2	400				
280	316	254	370	463	110	77.3	389	960	1293	1812	1921
270	274	204	310	425	104	65.1	369	960	1247	1727	1869
260	226	151	207	373	98.1	53.6	341	943	1187	1599	1778
250	179	97.2	97.2	301	90.8	43.8	294	903	1116	1433	1655
240	127	55.3	46.9	179	268	83.3	26.2	231	844	1004	1218 1490
230	79.6	12.4		83.8	264	75.0	3.2	161	754	875	1004 1280
220	49.6			12.4	240	65.9		97.2	643	734	794 1004
210	12.4				203	55.6		54.9	516	596	608 754
200					112	44.0		12.4	389	485	485 573
190									296	396	399 446
180									223	323	332 367
170									172	262	280 310
160									138	211	240 259
150									114	174	203 216
140									102	151	168 189
130									91.7	127	155 174
120									78.8	116	147 165
110											127

ELECTRON DENSITY

PUERTO RICO										60 W				24 FEB 1960			
TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300					
OUAL									A	A		A					
HMIN	109	108	109	107	108	110	214			205	207	202					
SCAT	60.3	51.6	55.2	68.1	56.3	52.3	49.9			53.2	56.1	49.1					
HMAX	307	297	307	332	304	307	315			357	349	322					
SHMAX	1806	1570	1584	1788	1445	1355	1048			628	649	466					
KM																	
360									794								
350										791	834						
340				1612						774	829						
330				1611						743	811	688					
320				1600			1640			698	778	688					
310	1907		1669	1571	1612	1640	1635			643	735	678					
300	1901	1815	1662	1524	1609	1635	1601			573	679	654					
290	1871	1808	1630	1640	1585	1598	1531			694	608	616					
280	1814	1768	1571	1371	1530	1529	1466			417	522	563					
270	1731	1694	1478	1266	1455	1436	1304			331	426	494					
260	1630	1587	1362	1161	1358	1309	1126			252	310	410					
250	1489	1446	1230	1042	1240	1143	894			179	198	310					
240	1318	1272	1026	917	1073	976	608			120	132	219					
230	1143	1096	896	794	917	794	310			80.8	83.8	127					
220	937	902	783	691	754	677	71.4			52.6	53.7	76.4					
210	754	731	665	598	594	491				22.0	17.7	43.9					
200	608	594	573	521	477	384											
190	492	485	495	455	389	296											
180	417	406	427	389	324	236											
170	362	346	369	326	277	186											
160	320	298	321	272	240	143											
150	279	256	276	231	210	122											
140	235	222	239	195	175	110											
130	198	198	198	160	143	105											
120	187	185	183	151	135	99.6											
110	143	143	97.2	127	112	12.4											

ELECTRON DENSITY

PUERTO RICO												25 FEB 1960											
TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100											
QUAL					A		S																
HMIN	213	199	221	221	201	187	204	210	111	109	108	109											
SCAT	38.6	48.9	33.2	49.3	35.5	59.6	77.7	36.2	44.6	43.1	51.1	48.3											
HMAXF	311	307	293	314	273	307	377	287	256	267	289	291											
SHMAX	320	320	184	221	170	155	178	200	604	831	1276	1527											
KM																							
380							161																
370							160																
360							159																
350							156																
340							152																
330							146																
320	582	492		355			139																
310	582	492		354			193	131															
300	570	490	410	348			193	121				1907											
290	540	477	409	333			189	110	417			1555	1906										
280	488	454	393	315	280		183	98.0	414			1544	1882										
270	417	422	362	288	279		174	85.9	395			1143	1504	1817									
260	335	379	305	240	271		164	74.7	362	917	1136	1431	1712										
250	240	320	232	179	251		150	64.4	310	912	1101	1332	1567										
240	143	240	135	112	223		132	54.6	231	886	1034	1195	1375										
230	78.1	156	60.0	57.2	173		112	4.7	143	841	938	1036	1166										
220	43.6	92.6			112		87.0	31.5	66.7	765	811	850	917										
210		53.0			52.6		64.6	12.4		643	670	679	716										
200		6.1					45.1			497	540	528	562										
190							12.4			362	431	430	457										
180										254	343	357	389										
170										187	274	299	335										
160										147	223	249	296										
150										119	182	204	259										
140										101	153	172	225										
130										91.3	131	158	198										
120										83.8	119	150	185										
110											83.8	127	127										

ELECTRON DENSITY

PUERTO RICO												25 FEB 1960											
TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300											
QUAL						A																	
HMIN	109	107	106	108	107	110	219	219	195	188	187	230											
SCAT	52.5	55.5	51.9	65.7	60.1	51.5	50.8	46.2	38.8	50.9	52.6	45.1											
HMAXF	296	304	301	319	332	310	318	317	277	324	347	333											
SHMAX	1535	1563	1570	1659	1762	1371	990	931	563	548	441	293											
KM																							
380												532											
370												530	461										
360												745	518	461									
350												744	495	451									
340												730	464	430									
330												701	426	398									
320												660	335	302									
310	1756	1638	1741	1523	1568	1709	1428	1474				1143											
300	1750	1613	1722	1480	1494	1660	1362	1393				1143											
280	1714	1563	1659	1416	1406	1577	1268	1276				1143											
270	1643	1479	1582	1341	1295	1466	1149	1127	1134	536	286	245											
260	1555	1378	1467	1246	1157	1320	995	933	1090	458	237	179											
250	1418	1250	1325	1129	1016	1157	817	679	1011	369	190	112											
240	1240	1119	1160	1004	863	960	608	389	885	277	146	60.0											
230	1085	969	1004	882	724	732	362	143	695	192	109												
220	894	820	834	754	608	508	406	12.4	417	127	83.8												
210	716	689	686	643	521	375						161	78.7	60.0									
200	573	579	565	549	446	280						49.6	49.6	44.3									
190	477	490	477	470	389	219						12.4	12.4										
180	404	423	408	403	335	175																	
170	350	371	359	345	286	140																	
160	307	329	319	296	243	117																	
150	268	290	286	254	209	104																	
140	231	250	252	219	176	94.7																	
130	198	214	219	188	147	91.2																	
120	187	192	197	171	136	86.6																	
110	127	161	179	142	127	49.6																	

ELECTRON DENSITY

	PUERTO RICO												60 W												26 FEB 1960											
TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100																								
QUAL		F	F																																	
HMIN	256	267	247	220	209	213	267	239	110	109			A	A	A																					
SCAT	63.7	55.7	43.3	38.4	31.1	49.3	57.3	41.3	42.9	43.1																										
HMAXF	391	388	341	297	278	302	392	302	262	266																										
SHMAX	352	317	291	267	176	142	163	260	720	865																										
KM																																				
400	410						203																													
390	410	474					203																													
380	407	422					201																													
370	398	413					196																													
360	385	398					188																													
350	367	375	508				176																													
340	345	346	508				161																													
330	316	310	500				143																													
320	281	262	479				124																													
310	240	205	448			229	105	540																												
300	194	146	398	557		229	83.8	540																												
290	146	97.2	322	552		226	62.5	528																												
280	97.2	57.5	234	529	417	218	45.3	501																												
270	60.0	19.0	143	496	410	206	12.4	461	1096	1215																										
260	23.7		71.4	417	381	190		389	1095	1210																										
250			29.1	304	335	167		274	1074	1175																										
240				169	257	134		60.0	1023	1107																										
230				71.4	161	87.7			942	1004																										
220					76.8	44.7			834	875																										
210									668	716																										
200									498	573																										
190									362	439																										
180									256	343																										
170									191	272																										
160									151	219																										
150									123	179																										
140									104	150																										
130									93.5	128																										
120									86.2	119																										
110									49.6	97.2																										

ELECTRON DENSITY

	PUERTO RICO				60 W				27 FEB 1960			
TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	A				A				S			
HM1N	109	108	108			110	199	196	187	202	230	216
SCAT	40.0	62.0	60.7			51.3	55.4	45.2	53.1	56.6	47.2	43.4
HMAXF	288	316	313			319	327	305	317	353	348	310
SHMAX	1739	2183	1821			1597	1376	957	699	588	488	352
KM										716		
350										716	735	
340										706	730	
330							1846			686	708	
320		2260	1876			1937	1838		896	651	668	608
310		2251	1875			1923	1801	1528	892	610	613	608
300		2223	1853			1873	1735	1523	871	556	540	599
290	2643	2161	1806			1786	1635	1486	834	493	456	573
280	2615	2070	1726			1653	1510	1411	782	421	356	534
270	2498	1949	1628			1495	1354	1297	723	348	262	477
260	2321	1805	1507			1323	1165	1143	655	275	161	400
250	2032	1618	1367			1116	946	960	573	204	93.9	304
240	1669	1409	1199			907	679	754	490	139	49.6	187
230	1240	1200	1023			695	489	524	389	92.4		93.6
220	804	804	853			530	190	286	286	60.0		40.2
210	643	784	694			404	87.8	127	179	35.7		
200	477	622	567			316	17.4	43.9	89.4			
190	389	500	466			253			33.5			
180	335	411	395			207						
170	286	350	341			171						
160	252	302	297			143						
150	225	259	249			124						
140	206	223	208			112						
130	194	200	184			105						
120	185	188	171			97.9						
110	182	161	161									

ELECTRON DENSITY

	PUERTO RICO				60 W				28 FEB 1960			
TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL				A								
HMIN	110	109	109	108	109	112	217	222	199	198	215	244
SCAT	53.5	50.4	62.5	59.6	53.4	59.5	46.1	46.0	41.8	55.9	56.4	62.5
HMAX	315	309	319	334	330	318	317	309	283	346	369	385
SIMAX	1918	1890	1887	1926	1875	1732	1171	1095	627	783	629	623
94												
390												735
380												734
370											764	725
360											759	706
350										960	742	679
340					1876	2016				957	713	640
330					1874	2016				940	674	593
320	2161		1846		1850	1999	1937	1923		906	619	536
310	2156	2193	1837		1800	1947	1928	1912	1861	858	552	470
300	2118	2176	1805		1722	1852	1892	1859	1844	794	477	396
290	2043	2166	1749		1625	1728	1828	1760	1785	1179	716	402
280	1932	2002	1669		1492	1576	1731	1622	1681	1177	631	327
270	1786	1860	1566		1341	1402	1613	1428	1511	1150	540	246
260	1585	1669	1438		1156	1218	1470	1180	1341	1088	446	171
250	1358	1467	1294		994	1036	1301	853	1112	994	344	121
240	1143	1240	1159		854	859	1079	546	716	860	249	80.5
230	932	1044	1004		731	716	875	198	262	679	611	52.6
220	745	834	857		632	601	679	49.6		389	94.7	22.0
210	598	651	716		556	508	508			143	56.7	
200	498	531	595		497	433	389			12.4	12.4	
190	429	446	494		446	369	310					
180	375	389	414		389	317	244					
170	329	342	352		335	270	198					
160	288	300	304		281	231	162					
150	244	260	262		236	198	136					
140	210	221	222		202	173	117					
130	194	198	197		179	156	107					
120	184	188	186		168	146	100					
110	49.6	143	143		127	83.8						

ELECTRON DENSITY

	PUERTO RICO						60 W				29 FEB 1960						
TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100					
QUAL	F	C	C	C	C	C	C	C	C								
HMIN	265									109	109	108					
SCAT	49*7									46*1	59*7	55*5					
HMAXF	381									285	320	305					
SHMAX	390									1034	1736	1897					
KM																	
390	565																
380	565																
370	558																
360	540																
350	508																
340	467																
330	417												1786				
320	352												1786				
310	286												1773	2177			
300	203												1736	2172			
290	124												1303	1674	2136		
280	71*4												1300	1585	2063		
270	32*2												1270	1475	1951		
260													1205	1341	1813		
250													1120	1194	1631		
240													995	1035	1421		
230													851	866	1143		
220													707	716	917		
210													573	585	716		
200													477	484	573		
190													389	405	461		
180													322	343	389		
170													268	291	335		
160													223	244	286		
150													187	198	245		
140													159	171	204		
130													141	157	179		
120													133	150	169		
110													97*2	127	127		

ELECTRON DENSITY

[illegible]

		AVERAGE ELECTRON DENSITY												KP BELOW 4.5	
		60 W													
		PUERTO RICO													
TIME		0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	TIME	
COUNT		25	24	26	26	26	25	24	25	26	27	25	26	COUNT	
HMIN		235	228	226	213	201	216	213	219	110	110	109	109	HMIN	
RATIO		5.5	5.8	6.1	7.0	5.6	4.3	4.2	5.9	5.1	4.7	4.5	4.4	RATIO	
SCAT		46.6	43.9	43.5	38.0	55.4	66.0	63.7	45.5	44.4	47.7	49.9	51.9	SCAT	
NMAX		636	592	574	491	308	261	240	470	1110	1610	1979	2099	NMAX	
HMAXF		344	327	320	296	312	357	352	312	277	286	297	299	HMAXF	
SHMAX		401	350	324	248	210	231	207	279	776	1236	1608	1777	SHMAX	
SHINF		2195	2020	1942	1633	1078	968	884	1605	3908	5778	7190	7697	SHINF	
KM														KM	
950		50.0	43.4	40.5	31.5	21.0	22.3	19.6	32.3	64.1	97.2	125	134	950	
900		64.1	55.7	51.9	40.5	26.9	28.6	25.1	41.4	82.2	125	160	172	900	
850		82.2	71.4	66.6	51.9	34.5	36.7	32.2	53.0	105	160	205	220	850	
800		105	91.5	85.3	66.5	44.3	47.0	41.2	68.0	135	205	263	283	800	
750		135	117	109	85.2	56.7	60.1	52.7	87.1	173	263	337	362	750	
700		172	150	140	109	72.4	76.6	67.3	111	222	336	431	463	700	
650		219	191	178	139	92.2	97.2	85.6	142	283	429	550	591	650	
600		276	242	226	176	117	122	108	180	361	546	700	752	600	
550		346	303	284	222	147	152	135	227	457	691	884	950	550	
500		425	376	352	277	182	186	166	282	574	867	1106	1187	500	
450		442	391	367	289	190	193	172	294	600	905	1155	1239	450	
400		459	407	382	302	197	199	179	306	627	945	1205	1292	400	
350		476	423	397	314	205	206	185	319	654	986	1256	1347	350	
300		492	439	413	327	213	213	191	331	683	1027	1308	1402	300	
250		509	454	428	339	221	219	198	344	711	1070	1361	1459	250	
200		525	470	443	352	229	225	204	356	741	1113	1415	1515	200	
150		541	486	458	365	237	231	210	366	770	1156	1468	1572	150	
100		556	501	473	378	244	236	215	381	800	1200	1522	1629	100	
50		570	515	488	390	252	241	220	393	830	1244	1576	1686	50	
0		583	529	502	403	259	245	225	405	861	1287	1629	1741	0	
30		594	542	515	414	266	248	229	416	890	1329	1680	1796	30	
60		602	554	527	426	272	250	232	426	920	1371	1730	1848	60	
90		608	564	537	436	278	250	235	436	948	1411	1777	1897	90	
120		610	572	546	445	283	249	236	444	976	1449	1822	1943	120	
150		608	577	553	453	287	247	236	452	1002	1484	1862	1934	150	
180		601	580	558	458	290	242	234	457	1026	1516	1898	2030	180	
210		587	577	559	461	292	235	230	459	1048	1545	1928	2050	210	
240		564	567	555	461	292	227	223	458	1067	1568	1951	2073	240	
270		532	547	543	458	291	215	213	454	1083	1586	1967	2086	270	
300		490	514	522	449	287	200	200	442	1094	1597	1973	2086	300	
330		437	468	488	436	280	185	183	422	1100	1597	1960	2063	330	
360		374	406	438	416	269	168	164	391	1098	1577	1915	2008	360	
390		301	327	372	389	254	148	142	348	1041	1532	1825	1913	390	
420		226	249	290	350	234	128	120	291	1042	1458	1703	1782	420	
450		151	174	203	297	207	106	77.5	231	977	1347	1538	1610	450	
480		84.3	104	124	234	174	85.8	77.2	159	882	1196	1338	1409	480	
510		24.2	55.0	65.2	162	136	64.3	57.6	96.3	760	1018	1122	1190	510	
540		16.5	22.0	25.4	91.5	94.7	42.3	37.3	51.8	623	827	898	970	540	
570		3.5	7.2	7.3	42.7	57.2	25.5	24.4	18.1	485	649	705	780	570	
600		1.7	.8	.2	12.9	21.1	8.4	10.3	5.4	365	506	557	625	600	
630					2.1	3.5	1.8	1.4	.6	271	397	443	504	630	
660							.6			201	317	370	417	660	
690										153	256	311	352	690	
720										123	210	263	302	720	
750										104	175	223	260	750	
780										93.9	150	191	224	780	
810										86.6	134	168	195	810	
840										77.8	124	155	177	840	
870										17.7	62.7	82.2	108	870	

|--|--|

TABLES OF IONOSPHERIC DATA

MARCH 1960 - OCTOBER 1956

Table 1

Point Barrow, Alaska (71.3° N, 156.0° W.)							
March 1960							
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs (M3000)F2
00	4.6	16				4.8	2.72
01	(4.6)	7				5.6	(2.65)
02	(4.2)	11				4.0	(2.60)
03	(4.6)	11				2.0	(2.58)
04	(4.3)	12				3.1	(2.65)
05	(4.4)	10				2.7	(2.55)
06	(4.4)	17				3.1	(2.38)
07	4.4	12				3.5	2.40
08	5.4	16				2.60	2.60
09	5.0	20				2.65	2.65
10	5.5	21				2.75	2.75
11	5.85	22				2.75	2.75
12	6.0	25				2.78	2.78
13	6.3	25				2.80	2.80
14	6.6	26				2.75	2.75
15	7.0	29				2.80	2.80
16	7.3	29				2.90	2.90
17	7.15	28				2.90	2.90
18	6.6	26				2.90	2.90
19	5.7	23				2.90	2.90
20	4.35	22				3.8	2.85
21	(4.0)	20				3.6	(2.70)
22	(4.1)	14				3.9	(2.75)
23	(4.1)	9				5.2	(2.70)

Time: 150.0° W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 3

Anchorage, Alaska (61.2° N, 149.9° W.)							
March 1960							
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs (M3000)F2
00	(3.05)	20				2.3	(2.55)
01	(2.8)	25				2.0	(2.55)
02	(2.0)	23				2.2	(2.60)
03	(2.8)	25				2.0	(2.50)
04	(3.25)	24				2.1	(2.50)
05	(2.9)	25				1.0	(2.60)
06	(3.85)	28			119	1.60	(2.70)
07	4.6	26			119	2.00	2.90
08	5.3	27		4.0	115	2.50	2.00
09	5.9	29		4.1	112	2.75	2.30
10	6.3	30		4.3	113	2.90	2.75
11	6.6	31		(4.2)	111	3.00	2.85
12	6.9	31		4.4	111	3.00	2.85
13	7.05	30		---	109	3.00	2.95
14	7.6	30		---	109	2.98	2.90
15	7.75	30		---	111	2.72	3.00
16	7.9	31		---	115	2.50	3.05
17	7.65	30			121	2.10	3.05
18	7.7	28			<143	(1.65)	3.10
19	6.75	28			---	---	3.08
20	5.2	27					3.05
21	4.1	28					3.00
22	3.65	26					2.85
23	(3.0)	27					1.5 (2.72)

Time: 150.0° W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 5

Fairbanks, Alaska (64.9° N, 147.8° W.)							
February 1960							
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs (M3000)F2
00	(2.8)	8				4.2	(2.70)
01	(4.0)	11				4.5	(2.50)
02	(4.3)	7				4.9	(2.55)
03	(3.0)	5				4.6	---
04	(5.8)	9				3.6	(2.45)
05	(4.3)	13				4.4	(2.55)
06	(3.9)	13				3.8	(2.50)
07	(4.1)	18				3.1	(2.65)
08	4.9	20					2.80
09	6.0	24					3.00
10	6.9	25					3.00
11	7.8	27					3.00
12	8.6	27					3.00
13	9.0	27					3.00
14	9.4	29					3.00
15	10.0	28					3.05
16	9.4	29					3.10
17	8.7	28					3.02
18	7.0	25					3.05
19	(5.6)	25					(3.05)
20	(4.5)	23					(2.98)
21	(4.2)	21				2.7	(2.90)
22	(3.25)	16				3.6	(2.80)
23	3.65	10				3.5	(2.00)

Time: 150.0° W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 2

Fairbanks, Alaska (64.9° N, 147.8° W.)							
March 1960							
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs (M3000)F2
00	(4.1)	7				4.8	----
01	(4.2)	7				4.6	(2.52)
02	(4.5)	13				4.4	(2.60)
03	(4.7)	7				4.3	(2.45)
04	(4.65)	10				4.0	(2.60)
05	(4.6)	14				3.2	(2.58)
06	(4.5)	19				3.0	(2.65)
07	5.4	15					2.70
08	5.6	18					2.70
09	5.7	24					2.72
10	6.0	25					2.80
11	6.5	25					2.80
12	6.75	26					2.80
13	7.05	26					2.82
14	7.0	28					2.80
15	7.3	25					2.95
16	7.4	25					3.00
17	7.1	26					3.00
18	6.9	23					3.02
19	6.0	25					2.95
20	4.85	22					2.92
21	4.0	18					2.85
22	(3.9)	15					3.6 (2.78)
23	(4.5)	11				4.2	(2.80)

Time: 150.0° W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 4

Baguio, P. I. (16.4° N, 120.6° E.)							
March 1960							
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs (M3000)F2
00	>12.2	24	250				(3.15)
01	>11.6	24	240				(3.20)
02	>10.0	29	235				3.25
03	6.8	27	230				3.02
04	5.75	28	260				2.85
05	5.1	27	270				2.90
06	5.9	29	290				1.8
07	9.1	31	265		129	(2.50)	2.8
08	---	(11.2)	31	255	120	3.15	3.2
09	---	(12.4)	31	(245)	121	(3.50)	3.8
10	---	>13.0	31	(235)	<120	(3.80)	(2.50)
11	---	>12.4	30	(230)	(121)	---	(2.40)
12	---	>12.0	30	<230	119	---	(2.35)
13	---	>12.0	31	(220)	119	---	(2.35)
14	---	>12.2	31	(230)	121	(3.80)	(2.40)
15	---	>12.6	30	240	121	(3.50)	(2.68)
16	---	>12.4	30	250	121	3.30	(2.70)
17	>11.0	31	265		125	(2.60)	2.8
18	>10.4	31	290		---	---	---
19	>11.1	30	370				(2.52)
20	>10.5	11	340				(2.45)
21	>11.0	14	270				---
22	>11.0	18	250				(2.00)
23	>11.5	20	250				(3.10)

Time: 120.0° E.
Sweep: 1.0 Mc to 25.0 Mc in 27 seconds.

Table 6

Adak, Alaska (51.9° N, 176.6° W.)							
February 1960							
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs (M3000)F2
00		3.2	24	300			2.65
01		3.2	24	310			2.65
02		3.2	25	315			2.60
03		3.1	25	315			2.60
04		3.1	25	325			2.52
05		3.2	26	315			2.55
06		3.25	28	310			2.65
07		4.7	29	230		120	1.70
08		7.3	29	220		110	2.15
09		9.2	29	220		108	2.60
10	---	11.0	28	215	---	105	2.95
11	---	11.8	29	220	---	107	3.10
12	---	12.1	29	215	---	107	3.10
13	---	11.9	29	215		110	3.02
14	---	11.8	28	220		110	2.90
15		11.2	28	220		111	2.68
16		10.5	29	215		115	2.25
17		9.3	29	210		128	1.72
18		7.3	29	205			3.20
19		5.85	28	215			3.30
20		4.35	26	215			3.32
21		3.5	25	240			3.00
22		3.25	24	265			2.90
23		3.2	25	275			2.72

Time: 100.0° W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 7

Huancayo, Peru (12.0° S, 75.3° W.)							
February 1960							
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs (M3000)F2
00		8.55	12	260			2.80
01		8.6	13	250			2.90
02		0.1	21	240			3.00
03		7.7	22	235			3.10
04		7.3	23	230			3.15
05		7.05	22	230			3.20
06		6.4	23	260			3.00
07		9.9	25	245	---	1.60	3.8
08		12.0	27	230	117	2.60	3.0
09	---	13.3	25	220	111	3.20	6.7
10	---	13.9	24	210	109	(3.60)	7.6
11	---	13.0	23	210	---	(3.05)	9.0
12	---	13.2	23	205	---	(4.05)	9.2
13	---	12.7	23	200	109	(4.15)	9.0
14	---	12.6	21	200	109	(4.12)	9.0
15	---	12.0	21	205	111	(4.00)	7.7
16	---	12.65	22	210	111	(3.00)	7.5
17		12.6	23	245	111	(3.40)	7.5
18		11.65	24	270	115	(2.95)	7.0
19		11.0	23	325	121	(2.18)	5.4
20		9.75	10	390			2.25
21		9.95	16	350			2.18
22		9.7	12	330			2.30
23		9.5	12	310			(2.40)
							(2.55)

Time: 75.0° W.

Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds

Table 8

Thule, Greenland (76.6° N, 68.7° W.)							
January 1960							
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs (M3000)F2
00		(4.05)	12	260			(2.92)
01		(4.6)	15	270			(2.70)
02		(4.15)	8	270			(2.80)
03		(3.6)	9	275			(2.70)
04		(4.05)	18	280			(2.70)
05		(4.25)	10	265			(2.88)
06		(4.1)	10	265			(2.80)
07		(3.8)	13	260			(2.78)
08		(4.4)	15	255			(2.90)
09		(4.3)	15	240			(3.00)
10		(5.1)	13	240			(2.95)
11		(5.7)	15	235			(2.98)
12		(6.35)	16	240			(3.05)
13		(6.25)	18	240			(2.95)
14		(6.5)	17	240			(2.85)
15		(6.0)	19	240			(2.95)
16		(6.35)	14	240			(2.90)
17		(6.3)	14	250			(2.85)
18		(6.0)	15	255			(2.78)
19		(6.7)	16	250			(2.88)
20		(5.85)	16	260	---	---	(2.88)
21		(5.65)	18	260			(2.80)
22		(5.0)	15	250			(2.78)
23		(4.9)	18	260			(2.82)

Time: 75.0° W.

Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 9

Huancayo, Peru (12.0° S, 75.3° W.)							
January 1960							
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs (M3000)F2
00		(8.5)	9	325			(2.62)
01		(7.7)	9	295			(2.85)
02		8.15	12	270			2.85
03		7.5	15	250			2.98
04		6.9	17	235			3.2
05		5.6	21	230			3.18
06		7.6	27	270			3.25
07		10.4	28	245	<13°	1.82	4.3
08		12.25	30	235	117	2.80	5.1
09		12.9	31	220	111	(3.35)	7.4
10	---	13.0	31	215	109	(3.80)	8.9
11	---	12.2	31	210	---	(4.05)	9.0
12	---	11.8	31	200	---	(4.20)	9.6
13	---	11.6	31	200	---	(4.30)	9.5
14	---	12.0	30	200	---	(4.00)	9.0
15	---	12.0	30	200	---	(4.05)	8.2
16	---	12.3	29	220	---	(3.85)	8.0
17		12.2	29	250	109	(3.50)	0.0
18		12.1	31	275	111	(3.05)	7.0
19		11.6	31	320	125	(2.30)	5.2
20		10.8	27	390			2.25
21		9.65	18	<390			2.25
22		10.0	10	350			2.12
23		(9.55)	8	345			2.28
							(2.50)

Time: 75.0° W.

Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 10

La Paz, Bolivia (16.5° S, 68.1° W.)							
January 1960							
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs (M3000)F2
00		>9.15	6	350			3.0
01		(8.85)	6	325			3.2
02		(8.5)	7	320			2.9
03		(7.6)	9	275			3.0
04		7.15	12	250			3.2
05		6.6	15	230			2.95
06		6.7	10	240	---	---	3.0
07		9.2	22	245	111	2.50	4.5
08		11.4	23	225	103	3.20	5.0
09	---	12.0	25	215	103	3.70	5.5
10	---	12.1	26	210	101	(4.00)	7.1
11	---	12.25	26	200	101	---	7.4
12	---	11.7	28	200	103	---	7.5
13	---	11.0	27	200	101	---	7.2
14	---	12.1	28	200	101	---	6.0
15	---	12.4	26	200	---	---	6.0
16	---	12.45	28	200	---	---	6.0
17	---	12.55	28	230	103	(3.80)	6.0
18		>12.05	28	240	104	(3.35)	5.4
19		11.6	20	280	105	(2.80)	5.6
20		10.45	20	370	137	2.00	3.4
21		9.8	13	430			2.25
22		(10.4)	7	400			2.15
23		>9.1	6	385			(2.25)
							2.5

Time: 60.0° W.

Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 11

Bogota, Colombia (4.5° N, 74.2° W.)							
December 1959							
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs (M3000)F2
00		9.35	30	205			3.40
01		6.5	27	200			2.5
02		>4.85	26	230			3.1
03		4.2	25	260			3.1
04		3.65	28	265			3.0
05		4.1	28	285			2.9
06		6.8	31	270	---	1.85	2.5
07		10.8	31	245	111	2.65	3.2
08	---	13.2	31	230	109	3.20	3.18
09	(265)	13.6	31	215	107	3.60	3.0
10	280	13.8	31	210	---	3.90	3.05
11	300	13.5	31	200	---	4.00	4.3
12	(330)	13.4	31	210	---	4.00	4.2
13	(380)	13.1	31	<215	---	3.98	4.2
14	(345)	13.2	31	230	---	(3.05)	4.4
15	---	13.2	31	240	---	3.60	4.2
16	---	13.0	31	<250	---	3.20	4.4
17		12.8	31	250	---	2.55	4.2
18		12.7	31	250	(115)		4.5
19		12.5	31	235			4.4
20		12.1	31	210			3.3
21		12.3	31	220			3.0
22		12.75	30	235			2.5
23		13.0	31	225			2.1
							3.30

Time: 75.0° W.

Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 12

Natal, Brazil (5.3° S, 35.1° W.)							
November 1959							
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs (M3000)F2
00		(11.0)	12	230			(3.05)
01		11.0	19	235			3.2
02		9.6	19	240			3.2
03		9.0	23	250			3.2
04		8.5	21	250			3.2
05		7.7	23	235			3.2
06		0.2	25	255	<153	1.70	3.08
07		10.4	26	250	119	2.75	2.9
08		11.8	27	235	111	3.30	4.3
09		12.7	26	230	113	3.70	5.4
10		13.1	26	220	111	(3.95)	6.2
11	---	13.1	27	210	111	(4.10)	7.2
12	---	13.0	28	210	(111)	(4.10)	8.0
13	---	13.0	28	205	(108)	(4.05)	8.0
14	---	12.8	29	205	(107)	(4.00)	6.6
15	---	13.1	29	215	(109)	(3.75)	6.2
16		13.0	27	230	(111)	(3.40)	6.0
17		12.85	28	255	113	(2.90)	5.8
18		12.5	29	285	---	---	4.4
19		10.4	28	390			2.10
20		(9.3)	6	430			(2.10)
21		>10.0	3	370			---
22		(10.15)	6	305			(2.52)
23		>10.25	8	255			(2.88)

Time: 30.0° W.

Sweep: 1.0 Mc to 25.0 Mc in 32.4 seconds.

Table 13

Tromsø, Norway (69.7° N, 19.0° E.)							
August 1959							
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs (M3000)F2
00	5.4	12	380				4.0
01	5.6	12	365		---	---	3.9
02	5.8	13	360		---	---	3.2
03	5.7	11	350		---	---	4.1
04	5.9	14	330	----	---	2.00	3.8
05	6.3	16	270	----	105	2.30	
06	6.05	6.6	17	250	4.10	110	2.70
07	6.00	6.6	20	250	4.50	110	3.00
08	6.90	7.0	23	250	4.50	110	3.20
09	5.50	7.2	22	245	4.75	110	3.20
10	4.90	7.1	22	240	4.70	110	3.20
11	5.15	7.0	25	240	4.90	110	3.30
12	4.50	7.2	24	240	5.00	110	3.40
13	4.45	7.0	27	240	5.00	110	3.40
14	4.90	6.9	25	245	4.75	110	3.20
15	---	6.7	23	245	---	110	3.15
16	---	6.3	25	250	---	110	3.10
17	---	6.2	27	270	---	110	2.90
18	---	6.2	25	295	---	120	2.70
19	---	6.5	20	205	---	110	2.40
20	---	5.8	26	310	---	115	2.20
21	---	5.8	10	340	---	---	3.9
22	---	5.9	13	320	---	---	4.0
23	---	5.5	0	360	---	---	3.0

Time: 15.0° E.

Sweep: 0.7 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 15

Sodankylä, Finland (67.4° N, 26.6° E.)							
August 1959							
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs (M3000)F2
00	5.6	12	350				4.3
01	(5.9)	7	300		---	---	4.4
02	(5.2)	6	360		---	---	4.3
03	5.6	10	320		---	---	4.0
04	5.4	12	345		---	---	4.2
05	5.6	19	295	---	120	2.30	4.1
06	5.7	24	260	---	115	2.60	4.3
07	6.2	24	250	---	110	2.00	4.3
08	6.0	25	240	4.6	115	3.00	4.0
09	6.9	25	240	---	110	3.25	4.2
10	7.2	26	230	4.9	110	3.35	4.0
11	7.3	23	230	---	110	3.50	4.3
12	7.1	26	225	---	110	3.50	4.0
13	7.0	26	225	---	110	3.50	4.2
14	7.0	27	225	---	110	3.45	4.3
15	7.1	27	230	---	110	3.40	4.0
16	6.8	27	230	---	115	3.20	4.2
17	6.5	27	250	---	110	3.00	4.2
18	6.6	24	250	---	120	2.90	4.0
19	6.4	27	275	---	115	2.70	4.0
20	6.4	18	275	---	115	2.50	4.0
21	6.5	15	315	---	---	---	3.0
22	6.4	17	290	---	---	---	3.3
23	5.8	12	335	---	---	---	3.6

Time: 30.0° E.

Sweep: 1.4 Mc to 22.0 Mc in 8 minutes, automatic operation.

Table 17

Budapest, Hungary (47.4° N, 19.2° E.)							
August 1959							
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs (M3000)F2
00	6.2	27	330				
01	6.1	28	330				
02	5.8	26	315				
03	5.6	26	320				
04	---	6.2	25	285	---	125	2.2
05	---	6.8	28	255	---	120	2.6
06	(350)	7.4	24	245	4.8	115	3.1
07	330	0.4	29	245	5.1	110	3.4
08	375	8.4	30	230	5.4	110	3.6
09	400	6.5	26	235	5.6	105	3.6
10	365	8.8	29	230	5.7	105	3.7
11	390	9.0	30	235	5.8	110	3.7
12	380	3.8	30	230	5.8	110	3.6
13	390	8.5	31	240	5.0	110	3.7
14	(370)	0.5	29	240	5.6	110	3.6
15	(385)	8.3	50	250	5.2	110	3.3
16	---	0.0	20	260	---	120	3.0
17	---	0.2	28	275	---	125	2.4
18	(7.2)	23	280		---	---	4.9
19	>7.0	20	270				4.1
20	(6.7)	23	290				3.6
21	(6.6)	26	290				3.2
22	(6.6)	27	310				3.2
23	(6.2)	28	320				3.0

Time: 0.0°.

Sweep: 1.0 Mc to 20.0 Mc in 35 seconds.

Table 14

Kiruna, Sweden (67.8° N, 20.3° E.)							
August 1959							
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs (M3000)F2
00		4.8	15	340			4.4
01		5.2	10	<350			3.7
02		5.3	13	335			3.6
03	---	5.2	18	325	---	---	3.0
04	---	5.2	21	290	---	---	1.8
05	---	5.9	18	260	---	120	2.2
06	---	6.3	21	250	4.0	115	2.6
07	545	6.5	22	240	4.4	110	2.8
08	520	6.9	24	240	4.8	110	3.0
09	440	7.0	27	240	4.8	105	3.0
10	435	7.0	27	230	4.9	105	3.2
11	420	6.8	29	220	5.2	105	3.3
12	420	7.0	29	225	5.2	105	3.3
13	430	7.0	29	225	5.2	105	3.3
14	400	6.8	29	230	5.1	105	3.2
15	430	6.7	28	230	4.8	110	3.0
16	415	6.4	28	240	4.7	110	2.9
17	---	6.0	29	250	---	110	2.7
18	---	6.2	29	275	---	115	2.5
19	---	6.2	24	265	---	125	2.0
20	---	5.8	26	300	---	---	1.8
21	---	6.0	21	300	---	---	3.4
22	---	5.5	17	330	---	---	3.8
23	---	5.3	17	340	---	---	4.3

Time: 15.0° E.

Sweep: 0.8 Mc to 14.0 Mc in 30 seconds.

Table 16

Luleå, Sweden (65.6° N, 22.1° E.)							
August 1959							
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs (M3000)F2
00		(5.4)	21	340	---	---	3.1
01		5.4	22	340	---	---	3.0
02		5.2	22	325	---	---	2.6
03	---	5.0	24	310	---	---	1.9
04	---	5.4	20	200	---	135	2.1
05	---	6.0	19	250	---	125	2.4
06	(450)	6.0	23	250	4.5	120	2.0
07	(490)	6.5	27	250	4.6	110	3.1
08	(510)	6.9	26	240	4.0	110	3.3
09	450	7.5	25	240	5.0	110	3.4
10	435	7.0	27	230	5.1	110	3.5
11	450	6.9	29	220	5.2	110	3.7
12	445	7.0	27	225	5.2	105	3.6
13	435	7.0	28	230	5.2	110	3.6
14	(430)	>7.0	30	235	5.1	110	3.4
15	(410)	7.0	27	235	5.0	110	3.3
16	---	6.6	29	250	---	115	3.0
17	---	6.6	30	250	---	120	2.0
18	---	6.4	30	260	---	130	2.6
19	---	6.3	28	265	---	140	2.2
20	---	6.0	25	275	---	155	1.9
21	---	5.6	25	300	---	---	1.5
22	---	5.4	22	300	---	---	3.0
23	---	5.5	19	315	---	---	3.0

Time: 15.0° E.

Sweep: 0.65 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 18

Rome, Italy (41.8° N, 12.5° E.)							
August 1959							
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs (M3000)F2
00		(7.6)	23	330			3.8
01		7.3	24	320			3.2
02		7.2	26	320			3.1
03		6.8	28	310			3.0
04		6.2	28	300			3.2
05		6.2	28	300		140	1.7
06		(7.0)	25	260		120	2.3
07	---	(8.2)	26	250	---	110	2.9
08	---	(8.8)	26	240	---	110	3.3
09	---	9.1	23	240	---	110	3.6
10	(445)	8.9	27	220	5.7	110	3.0
11	400	9.4	28	230	5.8	110	3.8
12	(400)	9.7	26	230	5.8	110	3.9
13	(400)	9.7	27	240	6.0	110	4.0
14	(390)	9.4	30	240	5.0	110	3.0
15	---	9.4	30	240	---	110	3.0
16	---	9.2	27	250	---	110	3.5
17	---	(9.1)	27	250	---	110	3.2
18	---	(9.0)	22	270	---	120	2.6
19	---	(9.2)	19	280	---	140	1.8
20	---	(9.0)	17	270			4.6
21	---	(8.6)	19	280			5.0
22	---	(0.6)	13	280			5.2
23	---	(7.8)	17	300			4.0

Time: 15.0° E.

Sweep: 1.4 Mc to 15.0 Mc in 5 minutes, automatic operation.

Table 19

Formosa, China (25.0° N, 121.5° E.) August 1959									
Time	h'F2	foF2-Count	h'F	foF1	h'E	foE	foEs	(M3000)F2	
00		(11.7)	23	300				2.70	
01		11.9	25	260				2.70	
02		9.8	25	260			1.9	2.75	
03		>9.2	24	260			1.9	2.85	
04		8.2	22	250				2.75	
05		7.3	25	270				2.70	
06		8.0	29	250				2.90	
07		9.6	27	240			4.2	3.10	
08		10.4	27	230				2.95	
09		10.6	26	(240)				2.70	
10	---	11.6	26	(240)	----			2.50	
11	---	>13.0	25	<240	----			2.50	
12	(400)	14.0	26	<260	----	---		2.60	
13	(390)	13.7	25	<270	(6.30)			2.65	
14	380	14.2	25	<270	(6.60)			2.65	
15	(360)	14.4	26	<250	(6.40)			2.65	
16	340	14.3	30	240	----	---		2.70	
17	---	>14.0	28	260	----	---		2.70	
18		14.2	28	<280	----	---		2.80	
19		14.4	27	280				2.70	
20		>13.8	26	280				2.70	
21		13.8	24	300				(2.60)	
22		>12.9	23	300				(2.60)	
23		(12.9)	23	310				(2.65)	

Time: 120.0° E.

Sweep: 1.1 Mc to 19.5 Mc in 15 minutes, manual operation.

Table 20

Bogota, Colombia (4.5° N, 74.2° W.) August 1959									
Time	h'F2	foF2-Count	h'F	foF1	h'E	foE	foEs	(M3000)F2	
00		9.9	23						
01		8.0	22						
02		7.4	21						
03		7.05	22						
04		5.95	22						2.0
05		5.3	22						2.2
06		6.05	20				1.90		2.4
07		8.0	22				2.85		3.2
08		8.75	22		---		3.45		4.0
09		9.6	21		---		3.85		4.4
10		10.8	21		---		4.10		
11		11.8	20		---		4.20		
12		12.8	21		(6.0)		4.30		4.5
13		13.2	21		(6.0)		4.20		4.7
14		13.9	21		(5.9)		4.10		4.7
15		13.6	21		---		3.88		4.5
16		13.1	21				3.45		4.5
17		12.3	21				2.85		4.5
18		12.3	22				----		3.2
19		11.35	22						3.1
20		11.35	22						3.0
21		11.8	23						2.5
22		11.55	22						
23		10.9	23						

Time: 75.0° W.

Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 21

Townsville, Australia (19.3° S, 146.7° E.) August 1959									
Time	h'F2	foF2-Count	h'F	foF1	h'E	foE	foEs	(M3000)F2	
00		6.7	23	250				2.85	
01		6.1	23	250				2.85	
02		5.4	25	250				2.95	
03		4.2	26	250				2.95	
04		4.0	24	280			2.5	2.75	
05		3.8	22	<310				2.70	
06		4.2	22	280			2.8	2.95	
07		>7.9	20	250			2.30	2.9	(3.15)
08	---	(10.6)	22	250			3.00	3.1	3.20
09	(250)	12.0	22	240	---		3.40	3.5	3.10
10	---	12.4	23	240	---		3.70		3.00
11	(280)	11.9	23	230	---		3.85	3.8	3.00
12	290	11.4	24	225	5.8		3.95	4.1	2.85
13	(300)	11.2	23	225	---		3.90		2.80
14	---	11.0	21	220	---		3.80	4.2	2.75
15	---	>11.0	25	230	---		3.65	4.2	2.70
16	---	(11.0)	24	250	---		3.30	4.2	2.80
17		(10.5)	25	250	---		2.80	3.9	2.90
18		>10.0	19	250			(1.95)	3.7	(2.85)
19		>8.0	14	250				3.6	----
20		>7.0	16	250				3.1	----
21		>7.0	10	275				2.8	----
22		(7.2)	19	250					(2.90)
23		>6.8	20	250					(2.85)

Time: 150.0° E.

Sweep: 1.0 Mc to 16.0 Mc in 1 minute 55 seconds.

Table 22

Brisbane, Australia (27.5° S, 152.9° E.) August 1959									
Time	h'F2	foF2-Count	h'F	foF1	h'E	foE	foEs	(M3000)F2	
00		6.6	22	270					2.70
01		6.0	24	260					2.70
02		5.5	25	260					2.2
03		5.5	23	260					2.1
04		4.8	25	255					2.60
05		4.7	26	260					2.65
06		5.5	26	250			<1.60		2.85
07		8.9	26	230			2.35		3.20
08		10.8	26	230			3.05		3.15
09		11.8	26	230			3.50		3.05
10		12.0	25	230			3.70	3.8	2.95
11		11.9	25	230			3.80	4.2	2.95
12		11.3	25	230			3.80	4.4	2.85
13		11.0	25	220			3.80	4.4	2.80
14		10.8	25	225			3.70	4.4	2.75
15		10.7	25	230			3.35	4.0	2.80
16		10.0	26	250			3.00	3.2	2.80
17		9.9	26	240			2.20		2.85
18		9.2	27	240			<1.60	2.0	2.85
19		7.8	27	250				2.0	2.75
20		7.7	27	250					2.75
21		7.5	25	260					2.75
22		6.8	26	250					2.75
23		6.6	26	260					2.70

Time: 150.0° E.

Sweep: 1.0 Mc to 16.0 Mc in 1 minute 55 seconds.

Table 23

Tromsø, Norway (69.7° N, 19.0° E.) July 1959									
Time	h'F2	foF2-Count	h'F	foF1	h'E	foE	foEs	(M3000)F2	
00		(5.8)	8	350	---	----	3.2	(2.55)	
01	---	(6.0)	7	(350)	---	----	3.9	(2.55)	
02	---	(6.4)	6	---	---	----	4.0	(2.55)	
03	---	(6.1)	9	(315)	---	----	4.0	(2.55)	
04	---	(6.0)	8	(265)	---	----	3.9	(2.55)	
05	(515)	5.8	14	(250)	4.20	----		2.45	
06	(450)	6.2	10	250	4.50	105	----	2.50	
07	(445)	(6.1)	9	(240)	----	105	----	(2.55)	
08	---	(6.3)	9	(250)	----	100	----	(2.55)	
09	450	6.6	14	240	5.05	105	----	2.55	
10	440	6.7	17	240	5.10	105	----	2.55	
11	445	6.7	18	230	5.05	110	3.50	2.50	
12	445	6.6	18	235	5.05	110	3.55	2.55	
13	465	6.6	19	240	5.10	105	3.50	2.55	
14	475	6.4	19	240	5.00	110		2.55	
15	495	6.0	18	240	4.85	110	3.60	2.55	
16	(495)	6.2	18	245	4.85	110	3.30	2.55	
17	---	6.4	19	250	----	110	3.20	2.70	
18	---	6.4	20	275	----	110	3.40	2.70	
19	---	6.2	16	205	----	115	3.20	3.6	
20	---	6.2	14	290	----			3.9	2.80
21	---	6.4	11	305	----			4.2	(2.60)
22	---	5.8	11	340	----			3.1	(2.55)
23	---	(5.4)	6	(305)	----			4.0	(2.40)

Time: 15.0° E.

Sweep: 0.7 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 24

Luleå, Sweden (65.6° N, 22.1° E.) July 1959									
Time	h'F2	foF2-Count	h'F	foF1	h'E	foE	foEs	(M3000)F2	
00		(5.6)	19	350	---		1.8	>2.7	(2.6)
01		(5.8)	18	310	---		(2.3)	2.6	(2.6)
02	---	(6.0)	16	295	---		(2.0)	2.6	(2.6)
03	---	5.8	17	270			2.3		2.6
04	(425)	6.0	18	250			2.5		2.6
05	(430)	5.9	18	245			2.8		2.7
06	(405)	6.1	17	245			110	3.0	2.6
07	(400)	6.4	18	(230)			4.8	3.3	2.5
08	400	6.5	20	225			4.9	105	3.3
09	405	6.6	19	230			5.0	3.5	2.6
10	400	6.6	21	(225)			5.1	3.6	2.6
11	405	6.6	22	220			5.2	100	3.7
12	400	6.5	23	220			5.2	100	3.6
13	395	6.6	24	220			5.2	105	3.6
14	440	6.5	23	225			5.2	105	3.4
15	375	6.2	22	(220)			5.0	3.4	2.7
16	---	6.4	21	(230)			5.0	110	3.2
17	---	6.5	20	230			4.6	3.0	2.7
18	---	6.5	23	250			4.4	----	(2.8)
19	---	6.3	23	255	---		2.6	2.6	2.8
20	---	6.3	24	260	---		2.4	2.4	2.7
21	---	6.2	20	295	---		2.0	2.6	(2.6)
22	---	(6.1)	19	300	---		(2.0)	2.3	(2.7)
23	---	(5.9)	18	305	---		(2.0)	3.0	(2.6)

Time: 15.0° E.

Sweep: 0.65 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 25

Nurmijarvi, Finland (60.5° N, 24.6° E.)								July 1959
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00	6.4	10						(2.60)
01	(6.7)	9						(2.65)
02	6.2	12						2.65
03	6.1	13						2.62
04	6.0	16						2.70
05	6.2	17						2.68
06	6.1	21		4.2		2.65		2.70
07	6.3	24		4.5				2.65
08	6.4	25		4.0				2.65
09	6.0	26		5.0		3.45	3.6	2.65
10	6.9	27		5.2				2.65
11	6.9	27		5.3				2.62
12	7.0	27		5.2				2.70
13	7.8	28		5.4				2.68
14	6.8	29		5.2				2.70
15	6.6	28		5.3				2.65
16	6.6	28		5.1				2.70
17	6.7	29		4.0				2.70
18	6.7	28						2.75
19	6.7	20						2.80
20	6.7	27					2.4	2.85
21	6.0	23						2.80
22	7.0	19						2.75
23	6.9	13						2.60

Time: 30.0° E.

Sweep: 1.0 Mc to 25.0 Mc in 1 minute.

Table 27

Sottens, Switzerland (46.6° N, 6.7° E.)								July 1959
Time	h'F2	foF2—Count	h'F1	foF1	h'E	foE	foEs	(M3000)F2
00	300	7.1	16					3.0
01	320	6.8	21					2.9
02	305	6.0	20					2.9
03	300	6.8	18					2.9
04	300	6.0	19					2.9
05	300	6.1	21	---	---			3.0
06	300	6.0	25	260	3.9	110	2.4	2.5
07	300	7.4	11	230	4.6	100	2.8	4.2
08	330	7.4	11	250	5.2	100	3.2	4.2
09	350	7.9	16	220	5.3	100	3.4	4.9
10	360	8.0	13	220	5.4	100	3.6	5.2
11	300	8.0	13	220	5.6	100	3.7	4.6
12	380	0.1	13	210	5.7	100	3.7	4.4
13	300	7.9	13	220	5.9	100	3.7	4.8
14	395	7.6	22	220	5.8	100	3.7	4.3
15	370	7.8	18	220	5.7	100	3.7	4.1
16	400	7.4	12	220	5.6	100	3.6	4.0
17	328	7.8	11	220	5.2	100	3.4	3.9
18	320	7.3	13	240	5.2	100	3.0	4.1
19	280	7.6	16	260	4.6	110	2.6	4.2
20	270	7.2	12					3.2
21	260	7.3	10					3.1
22	300	7.2	10					3.0
23	300	7.2	12					2.95

Time: 15.0° E.

Sweep: 1.0 Mc to 25.0 Mc in 30 seconds.

Table 29

Ibadan, Nigeria (7.4° N, 3.9° E.)								July 1959
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00	6.6	28	350					----
01	6.4	23	340					----
02	6.0	28	340					----
03	5.6	28	295					(2.90)
04	(5.4)	28	250					(3.08)
05	4.8	29	250					3.15
06	7.9	29	260			2.10		3.00
07	10.9	29	245			3.00		2.95
08	12.5	28	230			3.50	7.0	2.80
09	(13.2)	30	220			3.85	9.0	(2.55)
10	13.1	31	215			(4.10)	9.6	(2.35)
11	(12.6)	30	210			(4.25)	9.0	2.20
12	11.2	31	285			(4.25)	9.5	2.20
13	11.0	31	205			(4.15)	9.0	2.20
14	10.9	31	205			(4.00)	9.8	2.20
15	11.4	31	210			(3.75)	9.0	2.25
16	(11.6)	30	230			3.30	7.0	(2.30)
17	(12.0)	30	250			2.80	6.3	(2.30)
18	>11.5	31	285			1.85		(2.25)
19	>9.4	27	360			----		(2.10)
20	8.7	29	370					(1.95)
21	8.1	30	410					----
22	7.0	29	400					----
23	6.0	29	380					----

Time: 0.0°.

Sweep: 0.67 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 26

Upsala, Sweden (59.0° N, 17.6° E.)								July 1959
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00	6.2	29	300					3.7
01	6.0	28	305				0.90	3.6
02	---	27	295				1.10	3.4
03	300	6.0	29	300	2.7	110	1.50	4.2
04	365	6.1	30	270	3.6	105	1.98	4.0
05	390	6.1	31	245	4.8	105	2.45	4.0
06	405	6.3	30	240	4.6	105	2.75	4.0
07	430	6.4	30	230	4.0	105	3.15	4.2
08	445	6.9	29	230	5.0	105	3.30	4.2
09	430	7.0	29	225	5.2	105	3.50	4.4
10	450	7.8	20	225	5.3	105	3.60	4.4
11	430	7.1	29	230	5.3	105	3.65	4.4
12	460	7.0	29	225	5.4	105	3.65	4.1
13	470	6.9	29	220	5.5	105	3.65	4.1
14	440	6.9	29	220	5.3	105	3.60	4.0
15	420	6.8	30	225	5.2	105	3.50	3.6
16	400	6.9	30	230	5.0	105	3.35	2.6
17	370	6.0	30	240	5.0	110	3.15	4.0
18	355	7.0	30	240	4.5	110	2.70	4.2
19	335	6.8	30	260	4.0	110	2.30	4.0
20	---	7.0	29	270	---	110	1.80	3.2
21		7.2	29	275		110	1.40	3.1
22		7.0	29	200		120	0.90	3.0
23		6.8	29	290		115	0.80	3.3

Time: 15.0° E.

Sweep: 0.33 Mc to 20.0 Mc in 3 minutes.

Table 20

Rome, Italy (41.8° N, 12.5° E.)								July 1959
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00	(8.0)	23	310					3.5
01	(7.9)	25	310					3.2
02	(7.4)	24	300					3.1
03	7.0	25	300					3.1
04	6.6	28	300					3.1
05	6.8	28	280			140	1.9	2.7
06	7.8	29	260			120	2.5	3.1
07	---	8.5	27	250	---	110	3.0	4.5
08	---	8.4	22	250	---	110	3.4	5.4
09	(430)	8.8	26	240	5.3	110	3.6	5.2
10	(390)	8.8	26	240	5.5	110	3.0	5.3
11	400	9.2	24	230	5.7	110	3.9	6.0
12	410	9.5	25	220	5.8	110	3.9	5.3
13	390	9.1	26	220	5.8	110	4.0	5.1
14	390	9.2	26	220	5.9	110	4.0	4.7
15	410	9.1	27	240	5.5	110	3.8	2.65
16	(400)	8.7	26	240	5.4	110	3.6	4.7
17	---	8.6	25	240	---	110	3.3	2.75
18	---	8.8	24	260	---	120	2.8	4.4
19	---	9.0	19	200	---	120	2.0	5.4
20	(8.7)	16	270					4.7
21	(8.6)	15	280					4.5
22	(8.7)	19	280					3.6
23	(8.4)	19	310					4.0

Time: 15.0° E.

Sweep: 1.4 Mc to 15.0 Mc in 5 minutes, automatic operation.

Table 30

Singapore, British (1.3° N, 103.0° E.)								July 1959
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00	11.9	24	230					3.3
01	(9.4)	23	230					3.4
02	7.3	26	220					3.4
03	6.8	26	240					3.1
04	5.6	26	230					3.00
05	4.2	25	240					<1.7
06	6.0	26	290					1.0
07	9.5	24	215			20	2.70	2.0
08	12.4	21	240			110	(3.40)	2.0
09	14.1	22	260			110	7.70	2.7
10	14.7	23	220			105	4.00	2.20
11	---	13.9	21	215		105	(4.15)	2.20
12	410	13.1	23	210	---	105	(4.15)	2.10
13	400	12.3	24	210	---	105	(4.10)	2.0
14	425	(12.2)	23	210		105	4.10	2.1
15	340	12.8	22	230		105	3.70	2.20
16	---	12.4	23	240		105	---	3.0
17	(12.3)	27	245			110	2.80	3.0
18	12.5	27	265			---	---	3.0
19	12.9	26	295			---	---	3.2
20	13.1	20	310					2.6
21	(12.5)	15	260					2.2
22	(12.0)	19	230					4.2
23	12.6	20	240					4.0

Time: 105.0° E.

Sweep: 0.67 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 31

Townsville, Australia (19,3° S, 146,7° E.)									
Time	h°F2	foF2-Count	h°F	foF1	h'E	foE	foEs	(M3000)F2	
00		4,8	10	245				(3,00)	
01		>4,2	14	250				(2,90)	
02		4,0	13	250				(3,00)	
03		3,7	14	250				3,00	
04		3,3	14	250				2,80	
05		3,1	14	<295				2,80	
06		>3,5	13	275				3,00	
07		>7,0	13	250		2,10		(3,15)	
08		>9,5	13	250		2,90		----	
09	---	(11,5)	13	240		3,40		3,20	
10	---	11,8	12	230		3,60	3,6	3,10	
11	(250)	11,6	16	230		3,80	4,3	3,00	
12	---	11,3	17	230		3,88	4,5	3,00	
13	(270)	11,0	16	230		3,05	5,4	2,90	
14	(300)	(10,6)	16	230		3,70	5,5	2,00	
15	---	(10,0)	13	<245		3,45	5,0	(2,80)	
16		(10,2)	14	250		3,20	6,2	(2,90)	
17		>9,8	13	250		2,60	5,0	----	
18		>9,5	13	240		<1,70	4,4	----	
19	(7,2)	11	240			4,0		----	
20		>6,2	12	250		3,6		(2,80)	
21		>6,3	12	270		3,1		(2,90)	
22		(6,0)	11	250		2,7		(3,10)	
23		>5,5	9	250		3,1		----	

Time: 150,0° E.

Sweep: 1.0 Mc to 16,0 Mc in 1 minute 55 seconds.

Table 33

Kiruna, Sweden (67,8° N, 20,3° E.)									
Time	h°F2	foF2-Count	h°F	foF1	h'E	foE	foEs	June 1959 (M3000)F2	
00	---	5,2	21	375	---		4,4	2,4	
01	(365)	5,9	18	340	---	---	4,0	2,4	
02	300	6,0	18	290	3,4	---	2,0	3,9	2,4
03	390	6,1	16	255	3,6	110	2,4	3,0	2,5
04	400	6,0	24	250	4,0	105	2,6	2,0	3,4
05	400	6,0	25	240	4,4	105	2,8		2,4
06	420	6,2	23	235	4,7	105	3,0		2,4
07	405	6,5	26	230	4,0	100	3,0		2,5
08	425	6,8	26	230	5,0	100	3,3	3,6	2,4
09	445	6,6	26	225	5,1	100	3,4	3,4	2,4
10	450	7,0	27	225	5,2	100	3,4		2,4
11	450	6,8	27	225	5,3	100	3,4		2,4
12	450	6,8	28	220	5,2	100	3,4		2,4
13	460	6,5	29	220	5,2	100	3,4		2,5
14	460	6,4	20	220	5,2	100	3,4		2,4
15	450	6,5	27	225	5,1	100	3,3		2,5
16	435	6,5	25	230	5,0	105	3,2	3,4	2,6
17	---	6,4	26	240	4,7	105	3,0	3,1	2,6
18	(460)	6,3	29	250	4,3	105	2,8	3,8	2,6
19	(540)	6,2	29	255	---	110	2,6	3,0	2,6
20	(390)	6,2	26	290	3,9	110	2,3	3,9	2,6
21	---	6,0	26	300	---	110	2,2	3,4	2,6
22	---	5,8	24	315	---	---	---	3,0	2,6
23		5,8	15	375			4,0	2,5	

Time: 15,0° E.

Sweep: 0,8 Mc to 14,0 Mc in 30 seconds.

Table 35

Lwiro, Belgian Congo (2,3° S, 20,8° E.)									
Time	h°F2	foF2-Count	h°F	foF1	h'E	foE	foEs	June 1959 (M3000)F2	
00		>12,9	28	230				(2,8)	(2,95)
01		(11,6)	27	225				(2,8)	3,01
02		10,6	26	230				(3,1)	2,91
03		9,8	23	220				(2,4)	2,91
04		7,9	27	235				(2,8)	3,00
05		7,1	27	235				(2,4)	3,10
06		8,0	29	260				(2,2)	3,02
07	250	11,2	30	245		121	2,60	(3,2)	3,19
08	260	12,8	30	230		---	3,25	4,2	3,24
09	270	12,9	30	220		111	3,70	(4,9)	3,10
10	295	13,2	30	215	---	111	3,95	4,8	2,92
11	330	13,1	30	205	(5,2)	109	4,05		2,77
12	365	13,3	30	200	(5,2)	109	4,15		2,69
13	300	13,4	30	210	(5,1)	109	4,05		2,60
14	395	13,5	30	200	(5,0)	111	3,95		2,51
15	390	13,4	30	220	---	111	3,70	4,2	2,52
16	370	13,7	30	230		111	3,30	4,4	2,56
17	---	14,0	30	245		117	2,70	(4,4)	2,61
18		14,8	30	270				(3,3)	2,76
19		>14,9	30	275				(2,8)	(2,02)
20		>13,6	30	270				(2,0)	(2,87)
21		>13,1	28	230				(2,0)	<2,94
22		(14,0)	29	230				(2,5)	<2,91
23		(13,5)	29	230				(2,3)	<3,11

Time: 30,0° E.

Sweep: 1.25 Mc to 20,0 Mc in 3 minutes.

Table 32

Tromsø, Norway (69,7° N, 19,0° E.)									
Time	h°F2	foF2-Count	h°F	foF1	h'E	foE	foEs	June 1959 (M3000)F2	
00		(5,7)	9	360	---	---	4,0	(2,40)	
01	---	6,0	14	300	---	---	4,0	2,55	
02	---	6,2	13	340	---	110	2,50	4,3	2,50
03	455	6,1	17	270	3,80	---	2,60	4,0	2,45
04	430	6,4	20	260	4,05	110	2,75	3,2	2,55
05	450	6,2	22	250	4,45	110	2,90	3,8	2,45
06	460	6,6	21	250	4,65	105	3,15		2,50
07	490	6,9	21	250	4,75	105	3,25		2,50
08	460	6,8	23	240	5,00	105	3,50		2,55
09	450	6,6	26	240	5,10	110	3,45		2,45
10	460	7,2	30	230	5,10	105	3,55		2,45
11	460	7,2	26	230	5,15	105	3,60		2,45
12	500	7,0	26	225	5,30	105	3,65		2,40
13	495	6,8	29	230	5,20	105	3,65		2,40
14	480	6,6	27	240	5,10	105	3,60		2,55
15	475	6,6	27	230	5,10	105	3,50		2,55
16	460	6,4	27	240	4,90	105	3,35		2,55
17	(460)	6,4	28	250	4,60	110	3,25		2,55
18	---	6,4	27	260	---	110	3,00	3,9	2,70
19	(545)	6,5	27	260	---	115	2,98	4,0	2,60
20	---	6,2	24	305	---	115	2,70	3,9	2,60
21	---	6,2	20	310	---	---	3,10	4,0	2,60
22	---	5,9	19	310	---	---	---	4,0	2,55
23	---	5,8	16	360	---	---	---	3,8	2,45

Time: 15,0° E.

Sweep: 0,7 Mc to 25,0 Mc in 5 minutes, automatic operation.

Table 34

Slough, England (51,5° N, 0,6° W.)									
Time	h°F2	foF2-Count	h°F	foF1	h'E	foE	foEs	June 1959 (M3000)F2	
00		7,7	30	290			2,4	2,50	
01		7,2	30	300			2,4	2,50	
02		7,2	30	300			1,8	2,45	
03		6,7	29	300		---	1,15	1,8	2,50
04	---	6,8	30	300	---	115	1,80	2,1	2,60
05	370	7,2	30	260	---	110	2,45	2,7	2,60
06	430	7,4	30	245	4,4	105	2,90	3,4	2,70
07	300	7,8	28	235	4,8	100	3,30	3,8	2,65
08	330	8,2	28	225	5,0	100	3,50	4,3	2,60
09	400	8,2	30	225	5,5	100	3,75	4,6	2,60
10	435	8,2	30	215	5,5	100	3,85	4,8	2,60
11	430	8,0	30	215	5,6	100	4,00	4,3	2,68
12	415	8,0	30	220	5,7	108	4,05	4,3	2,60
13	430	7,8	28	220	5,7	100	3,95	4,6	2,60
14	420	7,8	30	220	5,5	108	3,90	4,4	2,60
15	410	7,8	28	220	5,5	100	3,80	4,2	2,60
16	405	7,8	29	235	5,3	100	3,60	4,2	2,70
17	400	7,8	28	245	4,9	105	3,35	4,1	2,65
18	---	8,0	29	240		105	2,95	5,0	2,75
19		8,1	27	255		115	2,50	3,4	2,00
20		8,1	29	270		---	1,90	4,0	2,75
21		8,2	29	270				3,0	2,70
22		8,0	30	<280				3,1	2,55
23		7,8	29	<290				2,2	2,50

Time: 0,0°.

Sweep: 0,65 Mc to 25,0 Mc in 5 minutes, automatic operation.

Table 36

Townsville, Australia (19,3° S, 146,7° E.)							June 1959	
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		>5,0	9	250				----
01		4,5	13	250				(3,00)
02		>4,0	12	250				(2,85)
03		4,0	14	270				3,05
04		>4,0	11	270				(2,85)
05		3,8	13	270				(3,00)
06		3,9	16	250		<1,70		(3,20)
07		>7,0	9	250		2,00		----
08		----	3	240		2,90		----
09		>10,0	6	240		3,30	3,7	----
10		>11,0	11	230		3,65		(3,10)
11		(11,2)	14	230		3,80	>4,6	3,00
12		(11,2)	13	230		3,80		(2,95)
13		>11,0	12	230		3,80	5,2	(3,00)
14		>10,7	8	220		3,70	4,4	----
15		>10,0	6	240		3,50	4,1	
16		----	2	250		3,20	4,1	
17		----	1	250		<2,60	4,0	
18		----	2	250		----	3,8	
19		>7,0	7	230			3,5	----
20		(6,1)	9	250			>3,0	----
21		>6,0	5	260				
22		>5,9	6	260				----
23		>5,0	8	250				----

Table 37

Townsville, Australia (19.3° S, 146.7° E.)

May 1959 *

Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00	>6.2	12	255					----
01	>6.5	9	250					(3.00)
02	5.6	12	265					(3.00)
03	4.3	11	260					(3.00)
04	>4.5	11	200					(2.90)
05	4.5	13	265					(2.95)
06	3.9	11	250		----			3.10
07	>7.0	7	240			2.15		
08	----	3	240			3.00		
09	>11.0	13	240			3.30		----
10	>12.0	13	240			3.55	3.0	(3.05)
11	(12.5)	13	230			3.00		(3.00)
12	(12.0)	14	230			3.75	4.0	(2.85)
13	>12.0	13	230			3.75	4.1	(2.85)
14	>11.5	11	230			3.60	4.1	----
15	>11.0	9	235			3.50		----
16	>10.5	6	245			3.20	3.4	----
17	----	1	250			2.50	3.7	----
18	----	0	250				3.6	
19	----	1	250				3.4	
20	----	2	240				2.3	
21	----	3	250					
22	>6.0	5	250					
23	(6.2)	7	250					----

Time: 150.0° E.

Sweep: 1.0 Mc to 16.0 Mc in 1 minute 55 seconds.

* Observations taken 14th through 31st only.

Table 39

Byrd Station (80.0° S, 120.0° W.)

January 1959

Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00	480	6.2	23	(275)	4.2	106	3.00	2.30
01	<515	6.2	19	<310	4.0	111	3.00	>3.1
02	565	5.6	19	<300	4.6	109	3.00	2.25
03	(530)	6.0	21	270	(4.3)	108	2.95	2.40
04	(560)	6.0	21	270	---	109	(2.90)	2.45
05	(600)	5.8	21	265	3.9	109	2.90	2.50
06	620	5.6	28	(260)	4.0	109	(3.02)	2.30
07	515	6.0	23	<260	4.4	105	3.00	2.50
08	<490	5.9	21	250	(4.6)	107	(3.12)	2.50
09	520	6.45	24	<250	4.7	105	----	2.45
10	540	6.5	24	260	4.8	105	----	2.38
11	470	7.0	21	245	4.8	105	(3.15)	2.50
12	495	6.95	20	245	4.8	107	>3.25	2.35
13	480	7.05	26	245	4.8	107	3.30	2.38
14	500	6.7	27	250	4.8	106	(3.40)	2.40
15	500	6.8	25	255	5.0	105	(3.32)	2.40
16	515	6.6	20	(260)	4.8	105	3.22	2.45
17	500	6.8	27	260	4.8	108	3.25	2.30
18	490	6.95	22	255	4.8	109	3.00	2.35
19	470	6.5	25	260	4.7	108	3.00	2.30
20	520	6.2	25	(290)	4.6	109	(3.00)	2.30
21	490	6.35	24	265	4.6	107	(3.20)	2.40
22	460	(6.5)	23	(270)	---	113	3.35	2.30
23	540	(6.4)	26	275	4.5	105	2.98	2.30

Time: 120.0° W.

Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 41

Hobart, Tasmania (42.9° S, 147.2° E.)

September 1958

Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00	>7.0	25	270					2.60
01	>7.0	26	270					(2.50)
02	>6.5	25	200					(2.60)
03	>6.0	25	260					(2.60)
04	>5.0	26	270					(2.40)
05	>5.0	25	270					(2.60)
06	>6.0	26	270			1.50		----
07	>8.0	27	240			2.55		(3.05)
08	>10.2	28	230			3.05		3.00
09	>11.9	28	230			3.50		3.00
10	12.2	28	230			3.70		2.85
11	12.5	28	230			3.80		2.80
12	12.5	27	230			3.90	4.0	2.75
13	12.0	30	230			3.80		2.75
14	11.6	30	230			3.75		2.65
15	>11.0	29	230			3.55		2.60
16	>10.5	29	240			3.20		(2.60)
17	>10.0	27	240			2.60		(2.70)
18	>10.0	28	250			----		(2.70)
19	>9.5	28	250			2.60		(2.60)
20	>9.0	28	250			2.70		(2.70)
21	>8.5	27	260			2.65		2.65
22	>8.0	25	260			2.70		(2.70)
23	(7.3)	25	200			2.65		(2.65)

Time: 150.0° E.

13.0 Mc in 1 minute 55 seconds.

Table 38

Concepcion, Chile (36.6° S, 73.0° W.)

February 1959

Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00	10.35	18	310				2.8	2.62
01	9.5	19	310				2.2	2.65
02	9.2	19	<300				2.7	2.60
03	>8.5	19	285				2.4	2.60
04	8.05	18	<290				2.3	2.50
05	8.05	18	310				1.8	2.50
06	9.35	13	245		---	E	2.32	2.5
07	10.8	18	230		109		3.00	3.2
08	11.7	18	230		105		3.45	3.8
09	11.9	22	220		106		3.75	4.2
10	12.4	23	220	---	109		----	4.5
11	(335)	12.9	23	(220)	---	107	----	4.7
12	360	13.75	24	230	6.5	109	----	4.7
13	360	13.8	25	(225)	---	109	(4.15)	>4.6
14	360	13.9	23	(230)	---	109	4.00	4.7
15	350	13.65	24	(240)	---	109	3.82	4.7
16	(340)	12.9	23	(240)	---	109	3.60	5.0
17	---	12.4	23	<250	---	111	(3.05)	4.3
18	---	12.6	23	(265)	---	111	2.40	4.4
19	---	12.7	22	290	---	----	----	4.0
20	>11.35	22	320				4.0	2.50
21	11.5	21	330				4.0	2.55
22	11.15	20	330				3.6	2.55
23	10.7	19	310				2.8	2.60

Time: 75.0° W.

Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 40

Pole Station (90.0° S.)

November 1958

Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00	450	7.1	29	250	(4.6)	103	2.75	2.55
01	450	6.9	28	245	(4.5)	103	2.80	2.48
02	(450)	7.1	28	250	4.4	103	(2.75)	2.45
03	460	7.0	27	250	4.5	101	2.80	2.40
04	450	7.0	29	245	4.4	103	(2.80)	2.35
05	455	(6.8)	30	245	4.3	101	2.80	(2.30)
06	450	6.85	28	245	(4.3)	101	(2.85)	2.35
07	455	(6.8)	26	230	4.2	101	2.80	(2.25)
08	440	(6.8)	28	230	4.2	101	2.80	(2.35)
09	490	6.2	26	245	4.3	101	2.95	2.25
10	515	6.0	27	255	4.3	101	(3.00)	2.30
11	550	5.7	25	260	4.3	101	3.00	2.30
12	580	5.6	27	265	4.3	103	3.00	2.35
13	(565)	5.95	28	255	4.6	103	2.98	2.45
14	515	6.3	30	250	4.5	102	2.90	2.45
15	(475)	6.9	29	250	(4.5)	101	(2.90)	2.55
16	(470)	7.1	28	250	(4.5)	101	2.95	2.50
17	(530)	6.7	25	250	(4.4)	101	2.80	2.55
18	475	6.3	29	250	4.3	101	(2.90)	2.50
19	445	6.5	28	245	(4.3)	103	2.98	2.60
20	(480)	6.6	27	250	4.5	102	>2.85	2.60
21	(430)	6.8	26	250	4.7	101	2.85	2.60
22	(460)	6.75	28	250	(4.8)	103	2.80	2.70
23	(420)	6.8	27	240	4.6	102	(2.72)	2.55

Time: 0.0°.

Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 42

Nurmijarvi, Finland (60.5° N, 24.6° E.)

August 1959

Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00	6.6	13						2.55
01	6.0	17						2.50
02	5.6	15						2.55
03	5.3	17						2.55
04	5.0	13						2.55
05	5.0	19			----			2.70
06	6.0	26			----	2.30		2.65
07	6.4	24			----	2.60		2.70
08	7.0	27			----	2.10		2.70
09	7.5	24			5.2	3.30	4.7	2.60
10	7.9	27			5.4	3.50		2.65
11	7.9	25			5.6	3.55	3.8	2.70
12	8.2	26			5.6	----	4.0	2.65
13	8.2	23			5.6	----		2.65
14	7.9	27			5.6	----		2.65
15	7.8	28			5.4	----		2.70
16	7.7	27			5.5	----		2.70
17	7.3	27			----	----		2.70
18	7.8	27			----	2.80		2.75
19	7.6	26			----	2.30		2.80
20	7.9	23			----	----		2.80
21	7.6	22			----	----		2.75
22	7.2	18			----	----		2.70
23	6.8	15			----	----		2.60

Time: 30.0° E.

Sweep: 1.0 Mc to 25.0 Mc in 1 minute.

Table 43

Lindau/Harz, Germany (51.6° N, 10.1° E.)								August 1958	
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	fEs	(M3000)F2	
00		7.07 29	294				2.0	2.50	
01		6.73 20	309				3.0	2.47	
02		6.36 29	303				2.6	2.47	
03		5.90 31	309				2.9	2.45	
04		5.76 31	305			E	2.0	2.45	
05		5.70 31	300			E	2.7	2.50	
06		6.40 30	262	----	110	----	3.6	2.73	
07	(360)	7.04 31	242	4.05	104	2.92	4.2	2.80	
08	(414)	7.60 27	236	5.25	103	3.29	4.7	2.75	
09	(435)	7.96 20	236	5.79	102	3.50	5.8	2.66	
10	429	8.56 28	229	5.00	102	3.71	5.5	2.65	
11	411	8.02 30	226	6.00	102	3.92	5.0	2.62	
12	406	0.86 30	222	6.00	102	3.94	5.3	2.60	
13	410	0.66 30	222	6.10	102	4.00	4.9	2.56	
14	416	0.66 30	220	5.90	104	3.99	4.9	2.56	
15	(437)	0.54 29	228	5.70	101	3.77	4.5	2.62	
16	(410)	0.22 29	231	5.45	102	3.52	4.4	2.62	
17	---	0.25 30	235	----	101	3.24	4.2	2.66	
18		0.44 30	252	----	104	2.76	4.6	2.72	
19		0.60 31	267	---	108	----	4.4	2.74	
20		0.43 31	265	---	---	E	4.0	2.70	
21		0.06 30	262	---	---	----	4.2	2.62	
22		7.65 28	274				3.4	2.58	
23		7.38 28	287				3.7	2.51	

Time: 15.0° E.

Sweep: 1.0 Mc to 16.0 Mc in 4 minutes.

Table 45

Townsville, Australia (19.3° S, 146.7° E.)								August 1958	
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	fEs	(M3000)F2	
00		(6.6) 12	250					(2.95)	
01		>6.5 18	250					(2.95)	
02		>6.5 24	240					3.00	
03		>5.2 26	230					2.90	
04		4.6 25	260					2.90	
05		>4.3 26	300					2.75	
06		4.0 24	280			<1.70		2.95	
07		>0.8 14	250		120	2.40		----	
08		>12.0 21	250		110	3.20		(3.15)	
09	(250)	13.1 24	240		110	3.50		3.05	
10	---	13.3 26	230		110	3.00		3.00	
11	(250)	12.6 26	220		110	3.90	4.2	2.85	
12	---	12.0 27	220	---	110	4.00	4.4	2.80	
13	(350)	12.0 27	210	6.6	110	3.95	4.5	2.70	
14	---	11.8 27	230	6.8	110	3.80	4.3	2.60	
15	---	>11.0 27	230	---	110	3.70	4.0	2.70	
16	---	(10.8) 22	250	---	110	3.50	3.7	(2.65)	
17	---	>10.0 7	250		120	2.05	3.4	----	
18	---	---	1 260		110	2.00	3.7	----	
19	---	---	1 255				3.1	----	
20	>7.5	8	260				3.0	----	
21	>7.0	8	<270					----	
22	>7.0	0	260				1.9	----	
23	>7.0	16	250					----	

Time: 150.0° E.

Sweep: 1.0 Mc to 16.0 Mc in 1 minute 55 seconds.

Table 47

Svalbard, Norway (78.2° N, 15.7° E.)								July 1958	
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	fEs	(M3000)F2	
00	(400)	4.8 19	260	----	110	2.40	3.1	(2.40)	
01	470	5.0 22	255	3.75	110	2.50	3.0	2.45	
02	500	5.0 25	250	3.75	110	2.60	2.9	2.35	
03	520	4.9 23	245	3.90	110	2.65	3.0	2.30	
04	530	4.9 21	240	4.00	110	2.80	3.0	2.35	
05	535	(4.9) 18	240	4.20	105	3.00	3.0	2.35	
06	600	(5.0) 18	245	4.30	105	----	3.2	2.25	
07	625	(5.2) 22	250	4.40	105	3.20	3.2	2.30	
08	570	5.4 22	240	4.60	105	3.30		2.30	
09	535	5.8 21	245	4.65	105	3.30		2.40	
10	510	6.2 25	235	4.80	105	3.35		2.40	
11	400	6.2 21	235	4.05	105	3.30		2.50	
12	500	6.0 20	225	4.70	105	3.30		2.40	
13	510	(5.9) 19	215	4.00	105	3.30		2.35	
14	540	5.8 25	210	4.80	105	3.25		2.35	
15	535	6.0 22	240	4.00	105	3.20	4.6	2.40	
16	450	6.0 23	240	4.00	105	3.10	5.1	2.50	
17	495	(5.8) 20	250	4.70	105	2.95	4.6	2.45	
18	465	5.0 21	250	4.40	105	----	7.1	2.45	
19	450	5.9 22	255	----	110	----	6.0	(2.45)	
20	430	5.8 22	250	----	110	2.70	4.0	2.55	
21	430	5.7 19	260	----	110	2.60	5.2	2.60	
22	440	(5.6) 22	250	----	110	2.60	4.0	2.50	
23	445	5.1 22	250		110	2.55	3.2	(2.40)	

Time: 15.0° E.

Sweep: 0.63 Mc to 24.6 Mc in 5 minutes, automatic operation.

Table 44

Cape Canaveral, Florida (28.4° N, 80.6° W.)								August 1958	
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	fEs	(M3000)F2	
00		7.25 30	<310						2.60
01		>7.2 30	<310						2.60
02		6.9 30	300						2.55
03		6.7 30	<300						2.60
04		6.35 30	300						2.65
05		6.0 30	280						2.60
06		6.7 30	270						2.80
07	---	0.2 30	240	---	<119	2.08	3.0	2.95	
08	---	9.2 30	<230	---	111	(3.45)	3.7	2.80	
09	(360)	9.6 31	<225	(5.6)	109	3.80	4.3	2.70	
10	390	10.1 30	<220	6.4	109	(4.05)	4.3	2.55	
11	390	10.6 31	(215)	(6.2)	(109)	(4.28)	4.5	2.55	
12	400	10.5 30	<230	6.4	(109)	(4.30)	4.6	2.55	
13	400	10.3 31	215	6.4	109	4.35	4.5	2.50	
14	390	10.05 30	(220)	(6.1)	109	4.20	4.4	2.55	
15	400	10.0 31	225	(6.0)	(111)	4.05	4.2	2.55	
16	390	9.7 30	230	(5.8)	(109)	3.80	4.1	2.55	
17	(350)	9.3 31	240	---	<113	3.35	3.8	2.60	
18		9.0 31	(250)	---	<119	----	3.2	2.60	
19		8.8 30	260					2.70	
20		8.15 30	270					2.60	
21		7.85 30	(290)					2.60	
22		7.65 30	300					2.60	
23		7.4 29	(315)					2.4	2.55

Time: 75.0° W.

Sweep: 1.0 Mc to 25.0 Mc in 27 seconds.

Table 46

Buenos Aires, Argentina (34.5° S, 58.5° W)								August 1958	
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	fEs	(M3000)F2	
00		8.4 27	280					2.70	
01		7.7 27	280					2.70	
02		6.8 26	270					2.80	
03		6.7 25	255					2.75	
04		5.8 25	250					2.70	
05		5.0 21	260					2.55	
06		5.6 22	275					2.70	
07		8.3 23	250					3.05	
08		10.5 24	240					3.05	
09		11.8 25	240					2.95	
10	---	12.4 24	240					2.85	
11	---	12.9 23	235	---	---	---		2.80	
12	---	12.7 24	255	---	---	---		2.75	
13	315	12.8 23	260	6.0	---	---		2.70	
14	350	12.5 27	240	---	---	---		2.70	
15	---	12.0 26	250	---	---	---		2.80	
16		11.8 28	255					2.85	
17		12.0 27	255					2.95	
18		10.6 28	240	---	---	---		2.90	
19		10.8 20	260					2.85	
20		11.5 29	250					2.80	
21		10.8 28	240					2.90	
22		10.5 29	250					2.75	
23		9.1 28	270					2.70	

Time: 60.0° W.

Sweep: 1.0 Mc to 25.0 Mc in 27 seconds.

Table 48

Lulea, Sweden (65.6° N, 22.1° E.)								July 1958
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00	---	5.5	21	330	---	130	1.8	3.0 (2.4)
01	---	5.4	23	340	---	130	1.7	2.4
02	450	5.3	24	320	3.2	130	1.9	2.4
03	450	5.4	25	280	3.5	125	2.2	2.4
04	430	5.6	24	260	3.9	120	2.5	2.4
05	470	5.6	27	250	4.2	120	2.8	2.4
06	490	5.8	26	240	4.6	110	3.0	2.35
07	480	6.3	24	230	4.8	110	3.3	2.35
08	470	6.4	24	230	5.1	110	3.3	2.4
09	460	6.5	23	235	5.2	110	3.4	2.35
10	470	>6.6	24	230	5.2	110	(3.6)	2.3
11	480	>6.7	24	230	5.4	110	(3.5)	2.35
12	480	6.8	26	230	5.3	110	(3.6)	2.4
13	470	6.9	26	230	5.3	110	(3.6)	2.3
14	475	6.5	25	230	5.2	110	(3.5)	2.4
15	480	6.4	27	230	5.1	110	3.4	2.4
16	440	6.4	27	235	5.1	115	3.3	2.5
17	(420)	6.4	27	250	4.8	120	3.2	2.5
18	---	6.1	27	250	---	120	2.9	2.6
19	---	6.2	27	270	---	125	2.7	2.65
20	---	6.1	25	275	---	130	2.3	2.6
21		(5.9)	26	295		135	2.1	2.5
22		5.9	25	315		150	1.9	2.4
23		5.0	23	340	---	1.7	2.7	2.4

Table 49

Lwiro, Belgian Congo (2,30° S, 20,8° E.)									
July 1958									
Time	h°F2	foF2—Count	h°F	foF1	h°E	foE	foEs	(M3000)F2	
00	>0,1	29	210				2,7	----	
01	>8,8	29	215				2,3	<3,40	
02	>8,0	30	225				1,9	<3,00	
03	>0,0	28	230				2,2	(3,09)	
04	>8,0	29	230				1,8	3,07	
05	>7,0	29	230				2,2	3,25	
06	7,1	29	260	---	---	E	2,0	3,04	
07	(260)	>11,2	26	250	---	117	2,55	3,3	<3,32
08	260	13,7	23	235	---	110	3,30	4,0	<3,23
09	270	13,2	25	220	---	109	3,65	4,2	3,14
10	300	13,4	20	220	(5,3)	109	3,95	4,0	3,02
11	340	13,5	29	215	(5,5)	107	4,10		2,86
12	370	13,4	29	210	(5,5)	107	4,20		2,70
13	420	13,3	28	210	(5,4)	107	4,10		2,58
14	440	(13,4)	29	210	5,2	109	4,00		2,47
15	450	(13,2)	30	215	5,1	109	3,60	4,4	2,45
16	420	>13,0	30	230	(4,7)	109	3,40	3,8	2,56
17	---	(13,9)	29	250	---	113	2,90	3,5	2,59
18	>14,0	30	275	---	---	(1,50)	3,4		<2,60
19	>14,0	30	200				2,9		<3,14
20	>10,4	30	290				2,7		
21	>7,0	30	230				2,4	----	
22	>7,0	30	220				2,7	----	
23	>10,4	29	220				1,0	----	

Time: 30,0° E.

Sweep: 1.25 Mc to 20,0 Mc in 3 minutes.

Table 51

Svalbard, Norway (78,2° N, 15,7° E.)									
June 1958									
Time	h°F2	foF2—Count	h°F	foF1	h°E	foE	foEs	(M3000)F2	
00	400	5,1	19	240	3,95	105	2,60	2,9	2,35
01	490	5,5	19	250	4,00	105	2,60	2,9	2,30
02	455	5,0	23	240	4,00	105	2,75	3,0	2,35
03	450	5,6	23	240	4,00	105	2,90	3,1	2,40
04	505	5,6	22	230	4,30	105	2,90	3,1	2,35
05	525	5,6	23	240	4,35	105	3,00	3,2	2,30
06	610	5,2	18	250	4,30	109	3,20	3,2	2,15
07	570	5,9	19	245	4,75	100	3,30		2,25
08	530	6,2	10	240	4,00	100	3,30		2,30
09	510	6,1	17	240	4,05	100	3,35		2,35
10	500	6,5	22	240	4,95	100	3,30		2,40
11	510	6,2	20	225	4,95	100	3,35		2,35
12	540	6,2	18	220	5,00	100	3,35		2,30
13	540	6,2	24	220	4,05	100	3,30		2,30
14	505	6,2	23	225	5,00	100	3,30		2,40
15	505	6,3	27	225	4,90	100	3,25		2,40
16	475	6,3	23	225	4,75	100	3,25	4,0	2,40
17	450	6,2	24	245	4,65	100	3,15	3,8	2,50
18	495	6,4	25	240	4,65	100	3,10	3,0	2,50
19	455	6,3	23	245	4,40	105	3,00	4,4	2,50
20	(450)	6,3	20	245	----	105	2,90	3,9	2,55
21	(445)	5,0	14	250	----	105	2,80	4,1	2,50
22	435	5,8	20	245	4,10	105	2,70	3,3	2,40
23	445	5,5	19	250	4,00	110	2,70	2,9	2,40

Time: 15,0° E.

Sweep: 0,60 Mc to 24,6 Mc in 5 minutes, automatic operation.

Table 53

La Quiaca, Argentina (22,1° S, 65,6° W.)									
June 1958*									
Time	h°F2	foF2—Count	h°F	foF1	h°E	foE	foEs	(M3000)F2	
00	>8,9	13	200						
01	0,0	14	210					(2,90)	
02	>8,0	13	210					(2,90)	
03	7,9	13	215					(2,00)	
04	6,0	12	220					2,90	
05	>5,1	12	220					<2,95	
06	4,5	11	220					<3,10	
07	>6,0	11	260	---	---	1,6		(2,90)	
08	>9,1	11	220		99	2,6			
09	---	>11,5	11	210	99	3,2	3,3		
10	---	>11,4	9 (200)		97	---	3,4		
11	---	>11,3	9	---	95	---	3,9		
12	---	>11,0	9	---	---	---			
13	---	>10,4	10	---	97	---			
14	---	>10,2	10	---	---	---	3,6		
15	>9,9	9 (205)			99	---			
16	>10,3	10 (215)			99	---			
17	>9,1	13	220	---	---	2,4	2,8		
18	>9,0	10 (245)			---	---	3,1		
19	>8,3	9 (260)					2,3		
20	>8,7	6 (220)							
21	>9,0	7 (215)							
22	>9,0	10 (210)					2,2		
23	>9,2	13	200					----	

Time: 60,0° W.

Sweep: 1,3 Mc to 10,0 Mc in 30 seconds.

* Observations taken 14th through 30th only.

Table 50

Buenos Aires, Argentina (34,5° S, 58,5° W)									
July 1958									
Time	h°F2	foF2—Count	h°F	foF1	h°E	foE	foEs	(M3000)F2	
00		6,8	22	300					2,70
01		6,4	22	280					2,70
02		6,2	22	270					2,75
03		6,0	22	260					2,90
04		5,4	22	240					3,10
05		4,1	21	260					2,30
06		3,0	19	270					2,70
07		6,4	22	260					3,05
08		9,6	22	230					3,25
09		10,5	20	240					3,25
10		10,0	22	235					3,20
11		10,9	22	230					3,05
12	---	11,5	21	240	---	---			2,95
13	---	11,9	21	235	---				2,85
14	---	12,5	22	250	---				3,00
15		12,3	23	245					2,95
16		11,0	22	250					2,95
17		11,0	22	230					3,20
18		10,0	22	215					3,10
19		9,6	21	230					3,00
20		9,0	21	235					2,90
21		10,0	21	240					3,00
22		8,3	21	240					2,90
23		7,6	21	270					2,65

Time: 60,0° W.

Sweep: 1,0 Mc to 25,0 Mc in 27 seconds.

Table 52

Lulea, Sweden (65,6° N, 22,1° E.)									
June 1958									
Time	h°F2	foF2—Count	h°F	foF1	h°E	foE	foEs	(M3000)F2	
00	---	6,2	22	330	---	1,7	3,1		2,4
01	---	6,2	22	330	---	1,0	2,7		2,4
02	(405)	6,2	23	300	---	2,1	2,5		2,4
03	400	6,1	23	270	3,8	130	2,4		2,4
04	400	6,4	24	260	4,1	115	2,7		2,45
05	440	6,5	24	245	4,5	115	3,0		2,45
06	475	6,4	26	240	4,7	110	3,2		2,4
07	500	6,4	27	230	4,9	110	3,3		2,3
08	495	6,7	26	225	5,1	105	3,5		2,3
09	480	6,8	27	230	5,2	105	3,6		2,3
10	500	6,0	26	230	5,3	105	3,6		2,3
11	500	6,7	20	225	5,3	105	3,8		2,35
12	500	6,7	29	230	5,4	110 (3,8)			2,3
13	500	6,6	20	225	5,4	105	3,8		2,3
14	500	6,6	29	230	5,4	110	3,7		2,4
15	490	6,5	28	230	5,2	110	3,6		2,4
16	450	6,5	29	230	5,2	110	3,4		2,5
17	410	6,6	28	250	(5,1)	115	3,2	3,5	2,5
18	(395)	6,6	20	250	---	115	3,0	3,4	2,6
19	(390)	6,5	28	260	---	120	2,7	3,0	2,6
20	---	6,6	26	270	---	130	2,4	2,9	2,6
21	---	6,4	27	315	---	150	2,1	3,0	2,5
22	---	6,2	27	330	---	---	1,9	3,0	2,5
23	---	6,3	24	335	---	1,0	2,7		2,4

Time: 15,0° E.

Sweep: 0,65 Mc to 25,0 Mc in 5 minutes, automatic operation.

Table 54

Buenos Aires, Argentina (34.5°S, 58.5°W)								June 1958
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		7.2	21	270				2.75
01		7.0	21	280				2.70
02		6.7	21	270				2.80
03		5.8	20	250				2.85
04		5.4	18	250				2.90
05		4.2	17	255				2.65
06		3.6	19	300				2.60
07		7.0	24	260				3.00
08		10.0	23	240		---	---	3.25
09		11.2	26	240		---	---	3.20
10		12.0	27	245		---	---	3.15
11		11.4	27	240		---	---	3.05
12	---	>11.5	27	240	---	---	---	<3.00
13	---	>11.3	27	240	---	---	---	2.95
14	---	12.2	26	240	---	---	---	2.85
15		12.0	25	250		---	---	2.95
16		12.4	26	240				3.05
17		11.2	26	225				3.10
18		10.2	27	225				3.00
19		10.6	26	240				3.05
20		10.2	27	235				3.60
21		9.4	25	235				2.95
22		8.5	24	250				2.85
23		8.0	22	260				2.75

Table 55

Lulea, Sweden (65.6° N, 22.1° E)									
Time	h'F2	foF2-Count	h'F	foF1	h'E	foE	foEs	(M3000)F2	May 1950
00		(6.2) 24	355				2.6	(2.2)	
01	---	(6.4) 22	350	---	---	---	2.0	(2.3)	
02	---	(6.5) 23	340	---	---	1.8		(2.3)	
03	---	6.4 25	300	3.5	130	2.0		2.3	
04	(540)	6.2 26	270	3.8	120	2.4		2.3	
05	(500)	6.4 25	255	4.3	120	2.8		2.4	
06	490	6.6 27	245	4.7	115	3.0		2.3	
07	480	7.0 27	245	5.0	110	3.3		2.4	
08	500	7.3 27	230	5.2	110	3.4		2.4	
09	510	7.4 28	230	5.3	110	3.7		2.4	
10	520	7.4 27	230	5.3	110	3.8		2.4	
11	505	7.4 30	230	5.5	110	3.8		2.3	
12	495	7.6 29	230	5.6	110	3.7		2.4	
13	490	7.6 30	230	5.5	110	3.7		2.4	
14	490	7.5 31	230	5.4	110	3.6		2.4	
15	475	7.5 31	235	5.2	110	3.4		2.5	
16	(470)	7.3 29	240	5.0	110	3.3		2.55	
17	---	7.5 28	250	---	120	3.0		2.6	
18	---	7.2 29	260	---	120	2.7		2.6	
19	---	7.3 29	270	---	120	2.4	2.6		
20	---	6.8 29	280	---	130	2.1	3.0	2.5	
21	---	(6.8) 25	290	---	---	1.8	2.8	2.5	
22	---	(6.7) 25	330	---	---	1.6	2.9	(2.3)	
23	---	(6.6) 18	340	---	---	---	3.2	(2.3)	

Time: 15.0° E.

Sweep: 0.65 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 57

Tucuman, Argentina (26.9° S, 65.4° W.)									
Time	h'F2	foF2-Count	h'F	foF1	h'E	foE	foEs	(M3000)F2	April 1950
00		>16.0 18	240				2.1	(2.95)	
01		>15.2 23	240				3.2	(3.10)	
02		15.0 26	240				3.45		
03		>13.1 26	225				2.4	3.30	
04		8.4 26	205				2.2	3.30	
05		6.8 26	225				1.2	2.85	
06		6.7 26	250					2.85	
07		9.1 25	255		131	2.20		3.00	
08		13.1 28	230		101	2.90		3.20	
09		>15.0 23	225		101	---	3.7	(3.15)	
10		16.0 17	220		101	---	4.2	(2.90)	
11	---	>15.9 16	(220)		101	---	4.8	(2.80)	
12	---	>16.1 12	210	---	101	---	5.1	---	
13	415	(17.0) 9	---	---	101	---	5.2	---	
14	405	>17.2 8	(205)	---	101	---	5.2	---	
15	410	(17.3) 7	230	---	101	---	5.0	---	
16	380	---	2 240	---	99	---	4.5	---	
17	---	---	2 250	---	111	2.65	3.5	---	
18	---	---	0 270	---	---	---	4.2	---	
19	---	---	0 320	---	---	---	2.5	---	
20	---	---	0 300	---	---	---	---	---	
21	---	---	0 250	---	---	---	---	---	
22	---	---	2 230	---	---	---	---	---	
23	---	>17.0 5	225	---	---	---	---	---	

Time: 60.0° W.

Sweep: 1.0 Mc to 25.0 Mc in 30 seconds.

Table 59

Alert, Canada (92.5° N, 62.7° W.)									
Time	h'F2	foF2-Count	h'F	foF1	h'E	foE	foEs	(M3000)F2	March 1958
00		6.0 15	360		---	---			
01		6.3 15	340		---	---			
02		5.8 16	340		---	---			
03		5.3 17	350		---	---			
04		5.8 14	370		---	---			
05		5.6 14	360		---	---			
06		6.9 14	380		---	---			
07		6.4 14	340		---	1.8			
08		7.0 13	340		---	1.9			
09		6.7 16	330		---	---			
10		6.8 14	380		---	---			
11		6.6 14	360		---	---			
12	---	6.8 14	350		---	---			
13	---	7.4 16	350	---	---	2.0			
14		7.9 17	330		---	---			
15		7.5 15	330		---	---			
16		8.0 14	320		---	1.8			
17		7.5 15	330		---	---			
18		6.0 17	320		---	---			
19		5.6 18	340		---	---			
20		5.8 18	340		---	---			
21		6.8 16	340		---	---			
22		5.4 16	360		---	---			
23		6.0 14	340		---	---			

Time: 75.0° W.

Sweep: 1.6 Mc to 20.0 Mc in 15 seconds.

Table 56

Svalbard, Norway (78.2° N, 15.7° E.)									
Time	h'F2	foF2-Count	h'F	foF1	h'E	foE	foEs	(M3000)F2	April 1950
00	---	5.6 18	305		---	1.05		2.40	
01	---	4.9 21	325	---	---	1.60	2.0	2.35	
02	---	5.0 26	300	---	120	2.00	2.1	2.45	
03	---	4.9 20	300	---	120	2.20	2.6	(2.30)	
04	545	4.9 19	290	3.70	120	2.20	2.8	2.40	
05	560	5.0 24	280	3.75	115	2.20	3.0	2.30	
06	615	5.2 18	275	3.80	115	2.65	3.1	2.30	
07	500	6.0 20	265	3.90	115	2.75	3.2	(2.35)	
08	540	6.9 19	260	4.10	110	---	3.2	2.30	
09	490	7.7 23	250	4.30	110	3.20	3.2	2.40	
10	475	8.1 27	250	4.40	110	3.20	3.2	2.40	
11	510	7.3 26	250	4.30	110	3.10		2.30	
12	545	7.0 24	245	4.60	110	3.10		2.40	
13	510	6.8 27	250	4.45	110	3.00		2.30	
14	480	7.1 28	250	4.55	110	3.10	3.1	2.45	
15	470	7.1 28	255	---	119	2.90	3.1	2.50	
16	425	7.2 25	260	---	115	2.90	3.3	2.55	
17	300	7.2 24	260	4.35	115	2.55	3.7	2.50	
18	---	7.1 25	265	---	115	---	3.8	2.55	
19	---	6.8 24	270	---	115	---	6.6	2.55	
20	---	7.1 25	280	---	120	2.30	3.3	2.50	
21	---	6.8 23	295	---	120	---	3.2	2.50	
22	---	6.4 21	300	---	---	1.95	2.2	2.45	
23	---	6.0 19	305	---	120	1.90	2.0	2.45	

Time: 15.0° E.

Sweep: 0.60 Mc to 24.6 Mc in 5 minutes, automatic operation.

Table 58

Buenos Aires, Argentina (34.5° S, 58.5° W.)									
Time	h'F2	foF2-Count	h'F	foF1	h'E	foE	foEs	(M3000)F2	April 1958
00		11.3 29	260					2.85	
01		10.7 29	295				3.0	2.65	
02		10.0 20	295				3.4	2.65	
03		9.6 27	270				3.0	2.70	
04		7.8 27	225				3.6	2.50	
05		6.7 26	245				3.4	2.40	
06		6.0 27	300		---	---		2.50	
07		10.1 29	240		---	---		2.95	
08		13.5 29	235		---	---		3.00	
09		15.0 29	235		---	---		2.95	
10		15.5 29	230		119	---		2.85	
11		15.5 29	235		---	---	5.0	2.70	
12	---	15.5 29	235		---	---		2.65	
13	(380)	15.8 29	240		---	---	4.9	2.60	
14	(375)	16.3 29	245	7.8	---	---	4.7	2.65	
15	---	16.5 28	245		---	---	4.1	2.70	
16	---	16.2 28	255		---	---	3.6	2.70	
17		15.8 29	260				3.9	2.75	
18		15.1 29	260				4.0	2.00	
19		>15.0 28	275					2.75	
20		14.7 29	260					2.80	
21		13.6 29	255					2.80	
22		12.9 29	260					2.80	
23		12.2 29	270					2.05	

Time: 60.0° W.

Sweep: 1.0 Mc to 25.0 Mc in 27 seconds.

Table 60

Lulea, Sweden (65.6° N, 22.1° E.)									
Time	h'F2	foF2-Count	h'F	foF1	h'E	foE	foEs	(M3000)F2	March 1958
00		(5.9) 15	390				3.0	(2.4)	
01		(5.8) 15	390		---	---	3.2	---	
02		(5.6) 12	370				2.8	(2.3)	
03		(5.4) 17	375					---	
04		(5.1) 14	370					---	
05		(5.5) 17	320		---	---		(2.45)	
06		(5.6) 16	290		---	---		(2.7)	
07		6.1 18	280		---	2.5		2.6	
08	---	6.7 18	260		130	2.7		2.8	
09	---	8.1 19	260		130	3.0		2.7	
10	---	9.4 18	255		120	3.2		2.7	
11	---	9.7 19	250		120	3.1		2.7	
12	---	10.5 19	250		125	3.2		2.7	
13	---	10.1 19	250		125	---		2.7	
14	---	10.0 19	250		130	3.2		2.8	
15	---	10.2 18	250		125	2.9		2.8	
16	---	9.9 17	255		125	2.8		2.8	
17	---	8.2 19	270		---	2.3		2.8	
18		7.8 18	290		---	---		2.85	
19		5.8 17	335		---	---	2.5		
20		(5.6) 16	320		---	---	3.1	(2.9)	
21		(5.2) 13	340		---	---	3.1	---	
22		(5.4) 14	410		---	---	3.0	(2.45)	
23		(5.4) 14	(380)		---	---	3.5	---	

Time

Table 61

Meenook, Canada (54.6° N, 113.3° W.)									
March 1958									
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	fEs	(M3000)F2	
00		5.1 15	320				4.6		
01		4.9 17	410				4.5		
02		5.0 15	400				4.5		
03		5.0 16	370				4.2		
04		5.6 17	360				3.9		
05		5.0 18	340				2.6		
06		5.1 19	310		---	---			
07		5.9 17	270		---	---			
08	---	6.0 19	250	---	---	2.7			
09	---	7.1 19	250	---	105	3.0			
10	---	7.0 19	220	---	100	3.0			
11	480	8.4 20	220	(5.0)	100	3.2			
12	(475)	8.6 23	230	(5.0)	105	3.4			
13	(500)	9.0 22	220	(5.3)	100	3.4			
14	---	9.2 24	240	---	105	3.2			
15	(430)	9.6 24	240	---	105	3.0			
16	(400)	10.1 24	240	---	110	3.0			
17	---	10.6 24	250	---	110	2.6			
18		10.2 20	250	---	---	2.0			
19		9.3 20	290	---	---	---			
20		6.9 19	200	---	---	---			
21		5.4 20	290	---	---	---	3.4		
22		5.2 20	310	---	---	---	3.5		
23		5.1 15	320				4.1		

Time: 105.0° W.
Sweep: 1.6 Mc to 20.0 Mc in 15 seconds.

Table 63

Lwiro, Belgian Congo (2.3° S, 28.8° E.)									
February 1958									
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	fEs	(M3000)F2	
00		>12.8 15	220				(1.6)	(2.68)	
01		(12.7) 15	240				(1.8)	(2.67)	
02		>11.5 16	245				(1.7)	2.71	
03		(11.3) 15	240				(1.6)	(2.77)	
04		10.4 16	230				(1.7)	2.87	
05		8.4 14	220				(1.6)	3.05	
06	---	6.7 15	230	---	E		(1.6)	2.90	
07	---	9.6 12	245	---	2.50		(3.5)	2.96	
08	(250)	10.9 12	235	---	113	3.20	3.2	2.86	
09	---	12.0 15	230	---	111	3.70		2.62	
10	---	13.0 17	220	---	---	4.00		2.42	
11	---	13.8 17	220	---	---	4.10		2.40	
12	---	14.6 10	220	---	---	4.25		2.44	
13	(440)	14.6 16	220	---	---	4.10		2.43	
14	440	14.6 17	220	(5.0)	---	4.10		2.36	
15	450	14.8 16	(230)	---	111	3.85		2.30	
16	(420)	>14.7 16	240	---	113	3.60		2.35	
17		14.8 16	250	---	113	3.05	3.3	2.34	
18		>14.0 15	280	---	---	2.10	(2.3)	(2.39)	
19		>13.5 15	345				(2.5)	(2.32)	
20		>13.5 14	325				(1.9)	(2.40)	
21		>15.2 14	265				(1.8)	(2.63)	
22		>14.0 14	220				(1.7)	(2.08)	
23		>14.0 14	215				(1.6)	(2.69)	

Time: 30.0° E.
Sweep: 1.25 Mc to 20.0 Mc in 3 minutes.

Table 65

Lulea, Sweden (65.6° N, 22.1° E.)									
January 1958									
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	fEs	(M3000)F2	
00		(5.5) 17	345				3.0	(2.4)	
01		(6.0) 25	340	---	---		3.2	(2.4)	
02		(5.9) 21	330	---	---		2.8	(2.4)	
03		(6.2) 25	310	---	---		3.0	(2.5)	
04		(6.3) 25	290	---	---			(2.5)	
05		(6.0) 26	270	---	---			(2.5)	
06		(5.5) 26	250					(2.55)	
07		(5.1) 28	265					(2.5)	
08		6.0 28	260	---	---			2.7	
09		8.3 30	250		150	1.9		2.9	
10		11.0 30	250		135	2.1		2.8	
11		13.0 29	245		140	2.3		2.8	
12		13.5 25	245		150	2.3		<2.9	
13		13.4 25	235		150	2.2		2.8	
14		13.4 27	230		160	2.0		2.8	
15		11.5 30	230	---	---	1.7		2.8	
16		10.5 29	225					2.85	
17		7.6 28	230					2.9	
18		(5.5) 26	260				1.6	2.75	
19		(5.4) 21	280				1.9	(2.6)	
20		(5.3) 21	275				2.6	(2.7)	
21		(4.8) 19	315				3.1	(2.6)	
22		(4.8) 13	345				3.1	(2.45)	
23		(5.1) 11	360				3.4	(2.5)	

Time: 15.0° E.
Sweep: 0.65 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 62

Alert, Canada (62.5° N, 62.7° W.)									
February 1958									
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	fEs	(M3000)F2	
00		5.6 20	340						
01		5.6 20	330						
02		6.0 22	330						
03		6.6 24	320						
04		6.2 22	340						
05		5.5 22	330						
06		5.6 23	330						
07		6.1 23	310						
08		6.3 22	300						
09		7.5 23	300						
10		7.0 24	310						
11		7.4 23	320						
12		0.0 25	310						
13		7.4 21	300						
14		7.0 26	310						
15		8.5 23	300						
16		0.1 23	310						
17		0.1 23	330						
18		6.7 24	320						
19		6.3 25	330						
20		5.8 22	320						
21		5.3 22	340						
22		6.0 21	340						
23		5.8 20	330						

Time: 75.0° W.
Sweep: 1.6 Mc to 20.0 Mc in 15 seconds.

Table 64

Alert, Canada (62.5° N, 62.7° W.)									
January 1950									
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	fEs	(M3000)F2	
00		6.7 27	300						
01		6.2 22	310						
02		6.0 23	300						
03		6.1 27	300						
04		5.9 20	300						
05		6.1 26	300						
06		5.6 25	300						
07		6.0 20	300						
08		6.3 28	300						
09		7.6 27	290						
10		7.4 25	290						
11		7.6 25	290						
12		7.8 29	290						
13		8.1 29	290						
14		7.8 27	200						
15		8.8 29	290						
16		7.6 29	300						
17		7.9 29	300						
18		7.5 27	300						
19		6.9 27	300						
20		6.1 29	310						
21		6.9 21	300						
22		6.4 26	300						
23		6.6 24	300						

Time: 75.0° W.
Sweep: 1.6 Mc to 20.0 Mc in 15 seconds.

Table 66

Meenook, Canada (54.6° N, 113.3° W.)									
January 1950									
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	fEs	(M3000)F2	
00		5.2 24	290						
01		5.0 29	290						3.2
02		5.0 26	310						3.6
03		5.3 29	300						4.4
04		5.2 26	310						4.0
05		5.0 28	300						
06		5.1 28	300						
07		5.4 31	200						
08		5.2 31	200						
09		7.6 31	250						2.0
10		10.2 31	230		(110)				2.5
11		12.0 31	230						110 2.0
12		13.3 31	220						110 3.0
13		14.0 31	230						110 3.0
14		14.1 30	220						110 2.9
15		14.0 31	220						110 2.6
16		14.0 31	220						--- 2.3
17		13.5 30	220						--- 1.9
18		12.1 30	220						
19		10.2 31	220						
20		8.8 30	220						
21		7.6 30	240						
22		6.0 29	250						
23		5.5 31	270						

Time: 105.0° W.
Sweep: 1.6 Mc to 20.0 Mc in 15 seconds.

Table 67

Port Lockroy (64.0°S, 63.5°W)							
December 1957							
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	fEs (M3000)F2
00	395	10.0	30	360	110	1.5	1.0
01	400	10.3	28	360	105	(1.4)	1.0
02	395	10.3	30	345	105	1.0	2.1
03	425	10.2	30	325	(3.8)	105	---
04	450	10.4	30	310	(3.9)	105	---
05	445	9.9	31	275	4.4	105	2.0
06	450	9.7	31	265	4.7	105	(3.1)
07	470	9.0	30	250	5.0	100	3.4
08	495	8.4	30	250	5.4	100	(3.7)
09	540	8.2	23	245	5.5	100	(3.9)
10	505	7.6	23	240	5.7	100	(3.9)
11	505	7.4	23	245	5.8	100	4.0
12	500	7.5	29	240	5.7	100	(4.0)
13	555	7.3	23	240	5.8	100	4.1
14	540	7.2	29	240	5.6	100	4.0
15	545	7.2	30	240	5.7	100	3.9
16	520	7.3	23	250	5.4	100	3.8
17	515	7.2	24	255	---	105	3.5
18	470	7.4	23	265	---	105	3.2
19	445	7.7	25	270	105	(2.9)	4.0
20	395	7.8	23	290	105	2.5	3.5
21		8.1	27	310	100	1.0	2.6
22		8.7	25	335	105	1.6	2.2
23		9.5	26	350	105	1.6	1.8

Time: 60.0°W.

Sweep: 0.67 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 69

Freiburg, Germany (48.1°N, 7.0°E)							
June 1957							
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	fEs (M3000)F2
00		7.9	23	305			2.1
01		7.4	26	305			2.2
02		7.2	23	305			2.3
03		6.8	26	315			2.4
04	---	7.1	27	290	---	121	(1.60)
05	385	7.6	26	255	4.00	111	2.60
06	390	8.2	23	240	5.05	107	3.10
07	400	8.2	27	235	5.50	105	3.40
08	395	8.3	27	225	5.50	105	3.70
09	420	8.4	23	(240)	5.85	103	3.90
10	415	8.6	23	225	5.35	103	4.00
11	410	8.7	26	215	5.80	105	4.00
12	435	8.6	27	225	6.00	105	4.05
13	435	8.6	26	225	5.70	105	4.00
14	420	8.6	28	225	5.65	104	3.90
15	405	8.4	26	235	5.70	105	3.70
16	330	8.0	27	235	5.40	107	3.50
17	340	8.2	26	245	---	109	3.10
18	---	8.4	26	255	---	111	2.60
19		8.4	23	275	123	<1.60	3.7
20		8.2	29	275			(3.0)
21		8.0	23	290			(3.1)
22		8.4	27	315			(2.7)
23		8.0	25	330			2.4

Time: 0.0°.

Sweep: 1.25 Mc to 20.0 Mc in 3 minutes.

Table 71

Freiburg, Germany (48.1° N, 7.0° E.)							
April 1957							
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	fEs (M3000)F2
00		7.0	30	320			2.35
01		6.7	29	320			2.35
02		6.4	29	305			2.35
03		6.2	29	295			2.40
04		5.8	28	200			2.50
05	---	6.1	29	260	---	119	1.70
06	---	7.0	28	240	---	111	2.55
07	---	8.0	30	230	---	103	3.00
08	375	9.0	30	225	5.50	103	3.35
09	380	9.8	30	220	5.80	103	3.60
10	370	10.6	30	220	5.70	103	3.80
11	360	11.0	28	225	6.30	103	3.80
12	355	11.2	30	230	6.15	105	3.90
13	355	11.2	30	230	6.15	103	3.80
14	360	11.0	30	230	6.05	105	3.70
15	---	10.7	30	235	(5.40)	105	3.50
16	---	10.6	30	240		107	3.05
17	---	10.4	29	245		111	2.55
18		10.2	28	250	<124	1.75	2.1
19		9.5	30	235			1.7
20		8.4	30	245			2.60
21		7.3	30	260			2.45
22		7.6	30	290			2.45
23		7.4	30	<310			2.40

Time: 0.0°.

Sweep: 1.25 Mc to 20.0 Mc in 3 minutes.

Table 68

Port Lockroy (64.0°S, 63.5°W)							
October 1957							
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	fEs (M3000)F2
00		9.5	18	330			---
01		9.0	22	330			---
02		8.7	19	345			1.0
03		8.1	21	350			(1.2)
04	510	7.7	23	350	---	110	1.4
05	465	8.2	28	305	(3.8)	115	2.0
06	470	8.8	27	265	(4.4)	120	2.3
07	490	9.0	27	250	4.9	110	2.0
08	500	10.0	25	240	5.5	110	3.3
09	445	10.6	25	235	6.1	110	3.4
10	375	10.9	29	240	5.5	110	3.6
11	425	11.0	23	240	6.2	110	3.7
12	375	11.2	29	240	---	105	3.7
13		11.3	29	240		110	3.7
14		11.2	31	240		110	3.6
15		10.4	31	245		110	3.5
16		10.4	29	245		110	3.2
17		10.1	27	250		115	2.8
18		10.1	27	260		115	2.3
19		10.2	25	270	125	1.8	2.2
20		9.7	20	275		1.6	2.55
21		9.6	21	295		1.4	2.50
22		9.3	23	305		---	2.35
23		9.6	21	320		---	2.30

Time: 60.0°W.

Sweep: 0.67 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 70

Freiburg, Germany (48.1°N, 7.0°E)							
May 1957							
Time	h'F2	foF2—Count	h'F	foF1	h'E	foE	fEs (M3000)F2
00		7.5	31	310			1.6
01		7.2	29	310			2.40
02		6.8	31	305			1.7
03		6.5	29	305			1.4
04		7.0	30	290			2.0
05		7.6	31	250		115	2.40
06	(325)	8.2	31	240	---	107	2.90
07	350	8.4	29	240	5.50	105	3.30
08	370	8.7	31	230	5.70	105	3.55
09	370	9.0	28	220	5.75	105	3.75
10	405	9.2	31	220	6.00	103	3.85
11	395	9.4	23	220	5.90	103	3.95
12	400	9.5	31	230	6.00	103	4.00
13	400	9.6	28	230	5.90	105	3.90
14	365	>9.6	31	230	5.75	104	3.80
15	395	9.4	27	235	5.60	107	3.55
16	350	9.0	30	240	(5.25)	103	3.30
17	---	9.0	30	250	---	111	2.90
18	---	9.2	30	260	---	116	2.30
19		9.2	29	260	---	---	2.5
20		8.5	30	255			(2.4)
21		8.2	28	275			(2.5)
22		3.0	31	290			1.7
23		7.8	30	305			1.5

Time: 0.0°.

Sweep: 1.25 Mc to 20.0 Mc in 3 minutes.

Table 72

Budapest, Hungary (47.4°N, 19.2°E)							
October 1956							
Time	h'F2	foF2—Count	h'F1	foF1	h'E	foE	fEs (M3000)F2
00	305	6.0	25				
01	305	6.0	24				
02	300	6.0	24				
03	200	5.7	23				
04	260	5.2	23				
05	260	6.7	25	---	---	---	---
06	240	9.0	29	200	2.8	125	2.3
07	235	10.4	29	220	3.5	120	2.9
08	235	11.1	27	230	4.5	115	3.1
09	230	11.6	23	220	4.6	115	3.3
10	235	12.0	26	220	4.6	115	3.2
11	230	11.5	22	225	4.7	110	3.2
12	235	11.4	23	235	4.7	115	3.2
13	235	11.4	24	225	4.1	115	3.1
14	240	11.2	24	230	---	115	2.9
15	240	11.4	24	---	---	120	2.4
16	235	10.6	24	---	---	---	---
17	235	9.7	27	---	---	---	---
18	240	8.3	27				
19	255	7.7	24				
20	275	6.8	25				
21	295	6.5	23				
22	300	6.4	23				
23	300	6.2	23				

Time: 0.0°.

Sweep: 1.0 Mc to 20.0 Mc in 35 seconds.

USCOMM-NES-BL

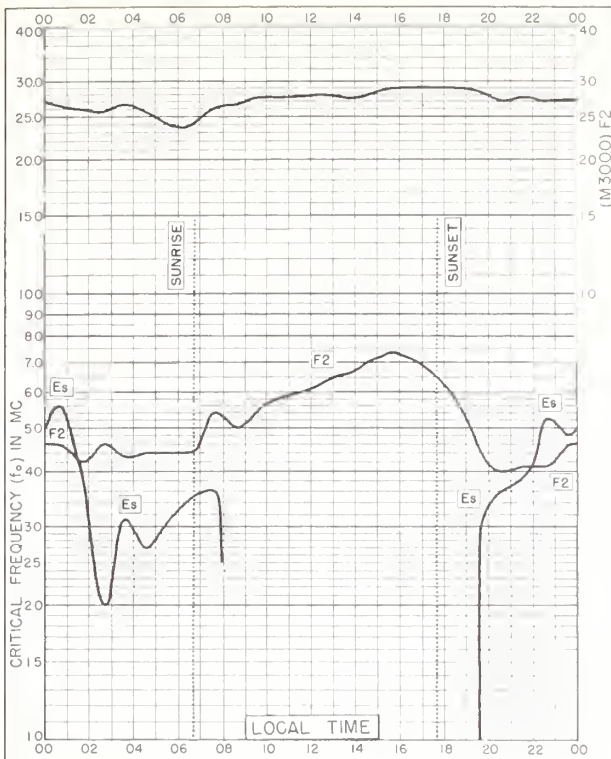


Fig 1. POINT BARROW, ALASKA
71.3°N, 156.8°W
MARCH 1960

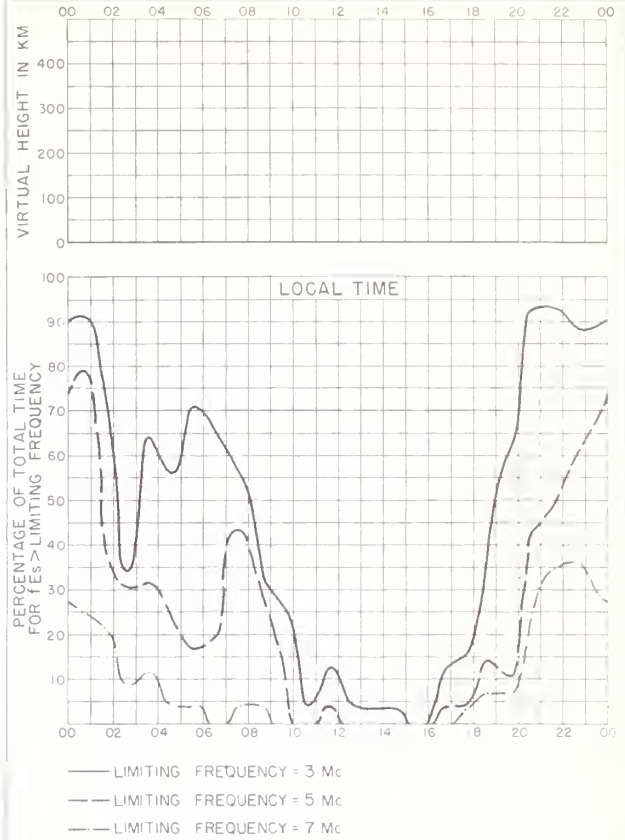


Fig 2. POINT BARROW, ALASKA MARCH 1960

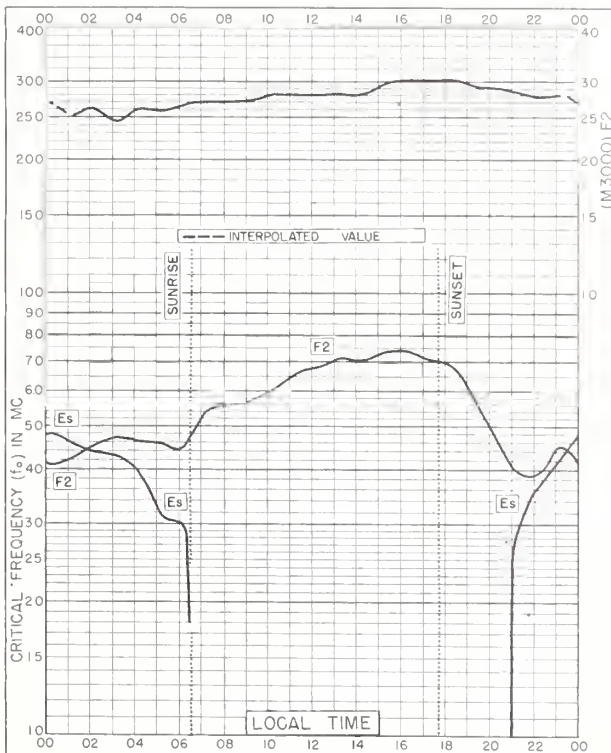


Fig 3. FAIRBANKS, ALASKA
64.9°N, 147.8°W
MARCH 1960

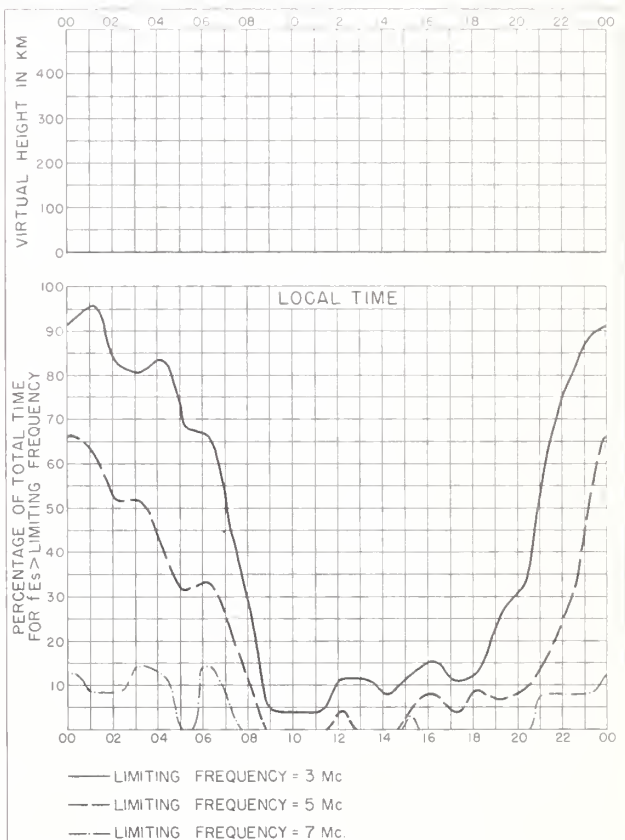


Fig 4. FAIRBANKS, ALASKA MARCH 1960

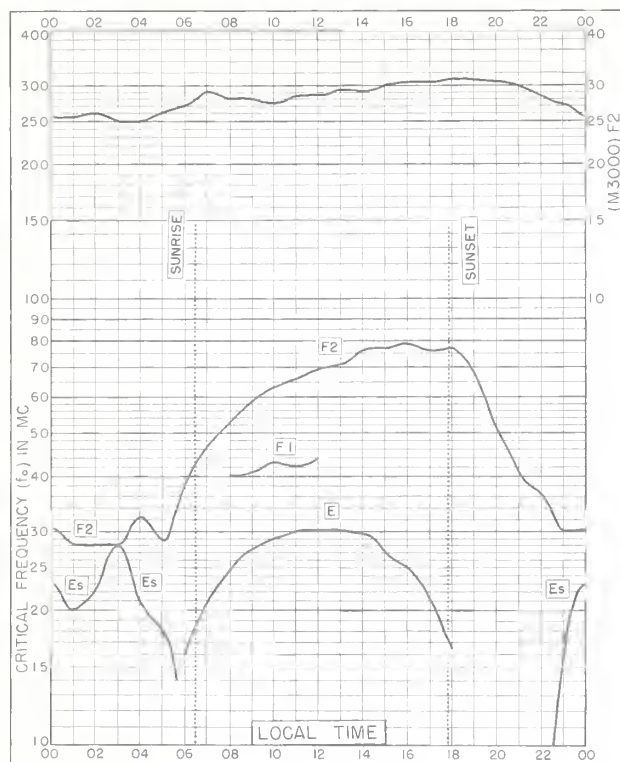


Fig 5. ANCHORAGE, ALASKA
61.2° N, 149.9° W

MARCH 1960

NBS 503

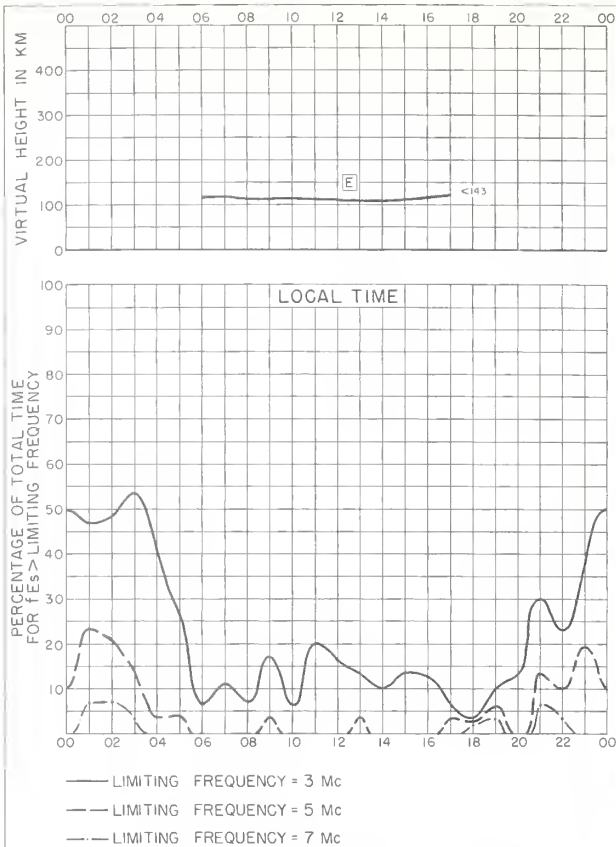


Fig 6. ANCHORAGE, ALASKA

MARCH 1960

NBS 490

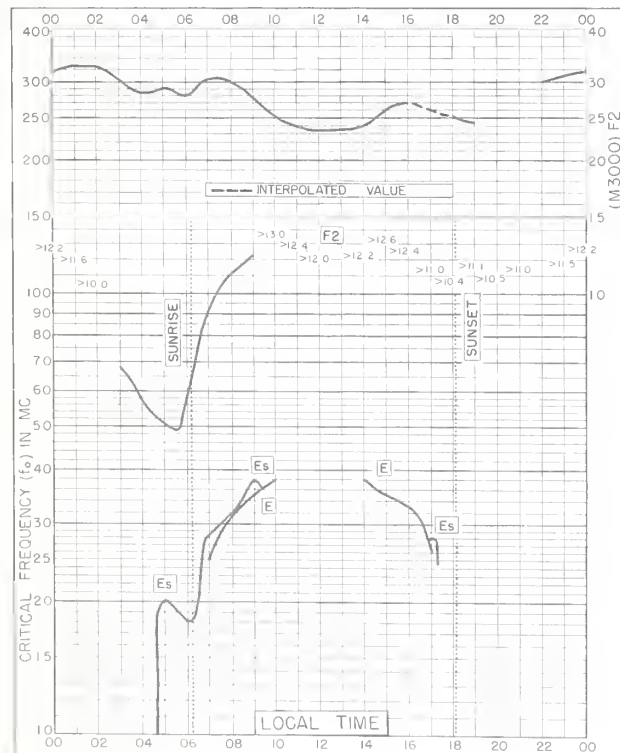


Fig 7. BAGUIO, PI
16 4° N, 120.6° E

MARCH 1960

NBS 504

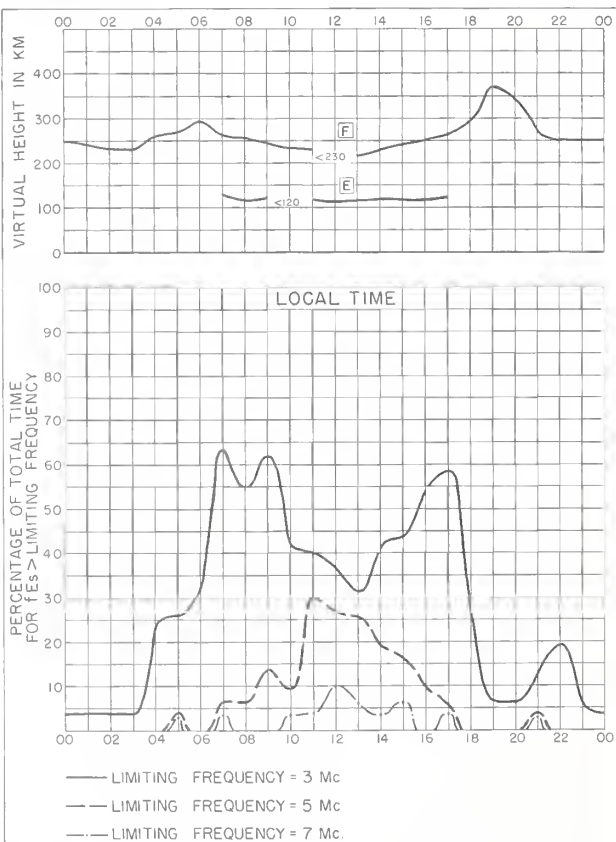


Fig 8. BAGUIO, P.I.

MARCH 1960

NBS 490

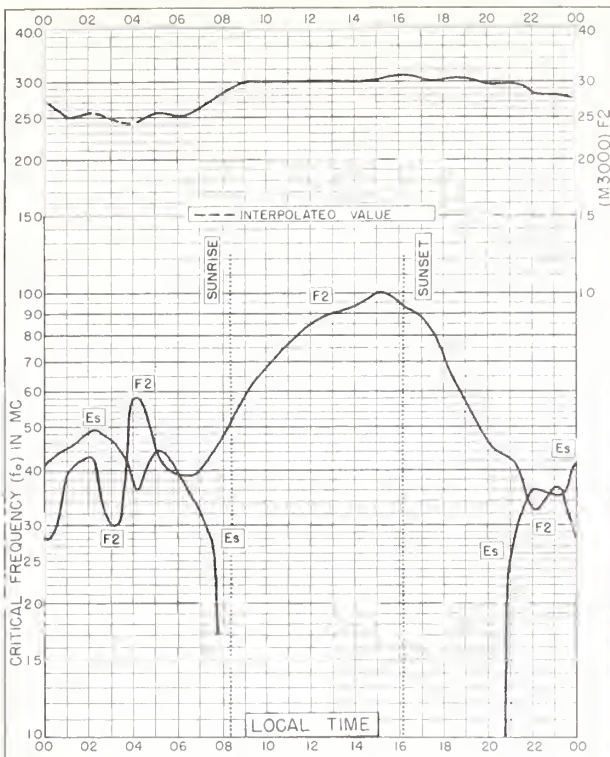


Fig 9. FAIRBANKS, ALASKA
64° 9' N, 147.8° W

FEBRUARY 1960

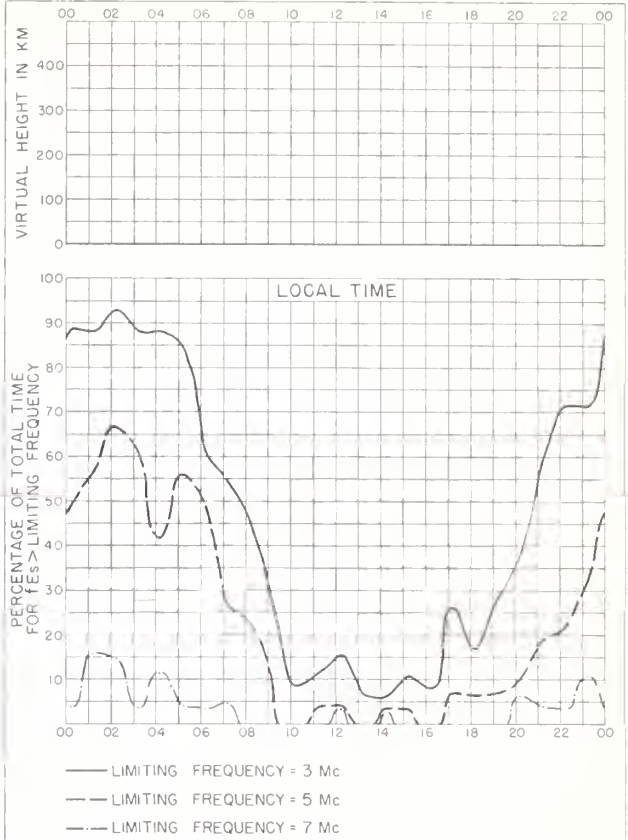


Fig 10. FAIRBANKS, ALASKA

FEBRUARY 1960

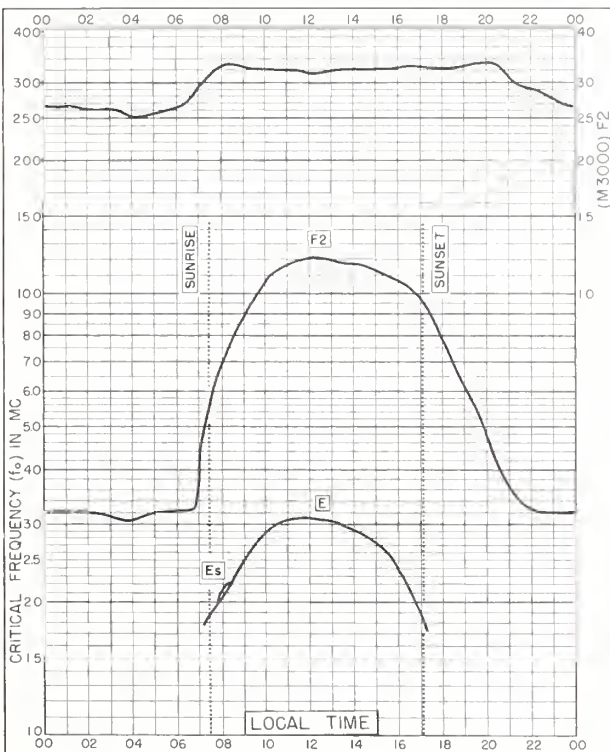


Fig 11. ADAK, ALASKA
51.9° N, 176.6° W

FEBRUARY 1960

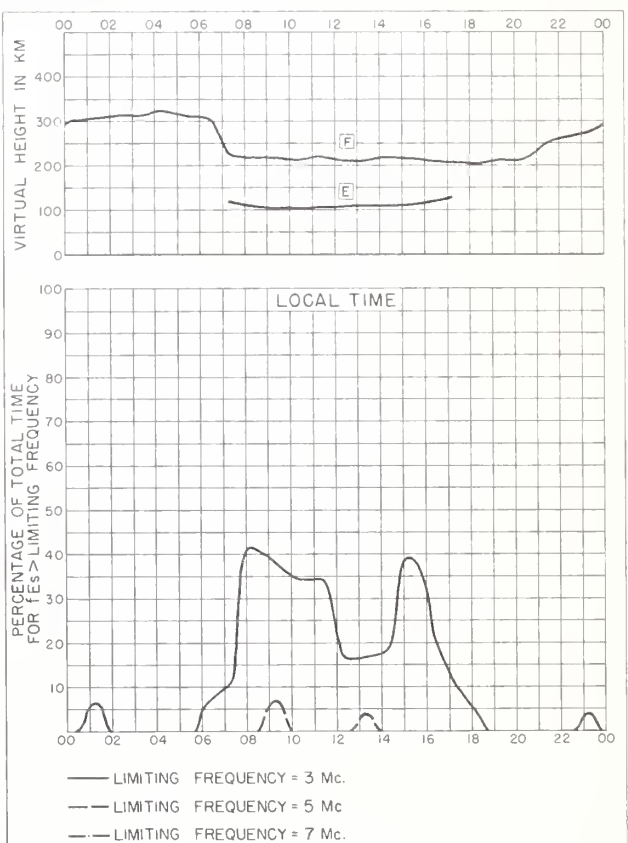
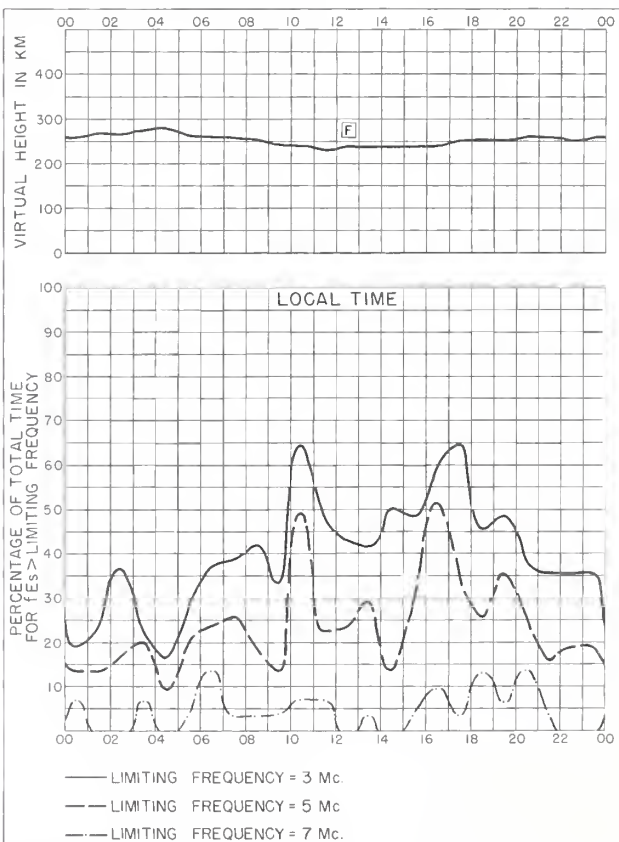
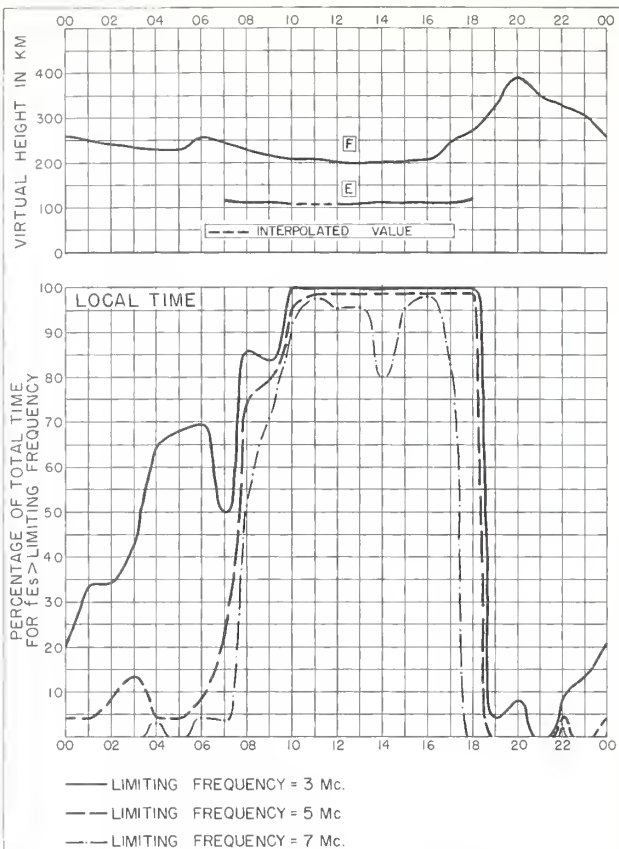
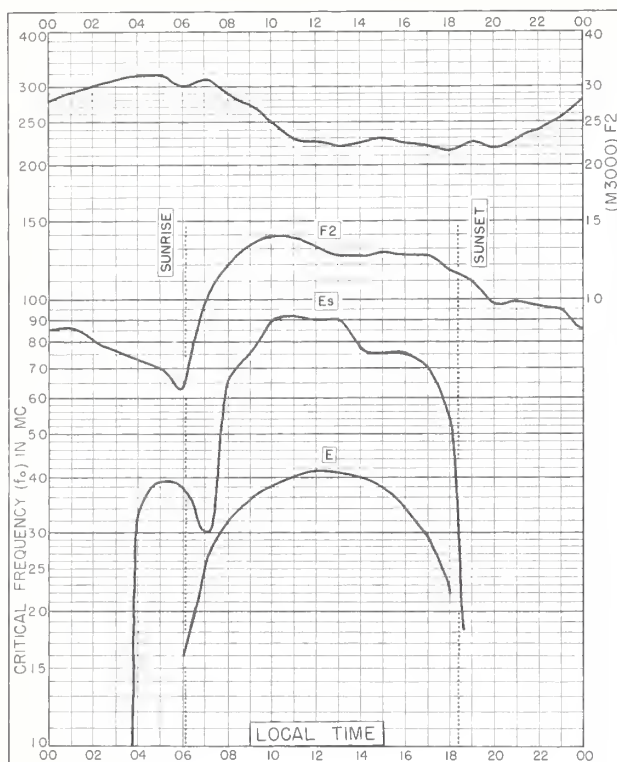


Fig 12. ADAK, ALASKA

FEBRUARY 1960



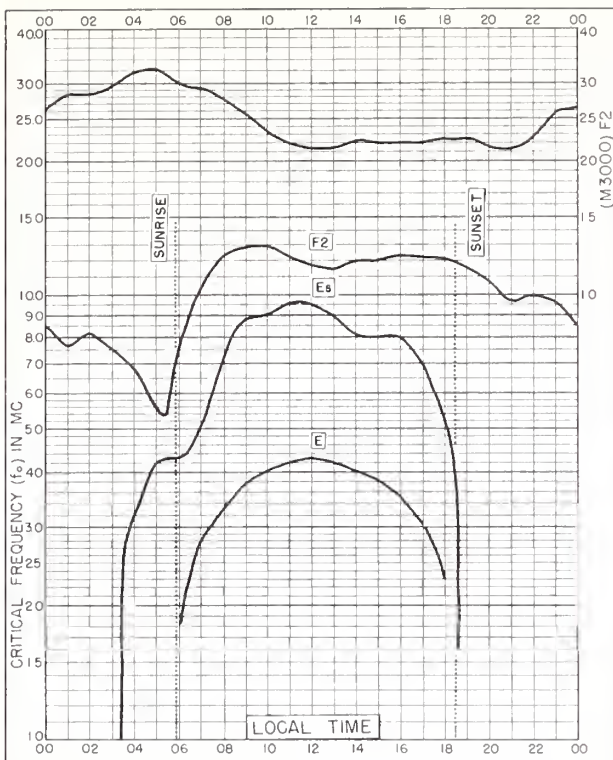


Fig. 17. HUANCAYO, PERU
12.0° S, 75.3° W

JANUARY 1960

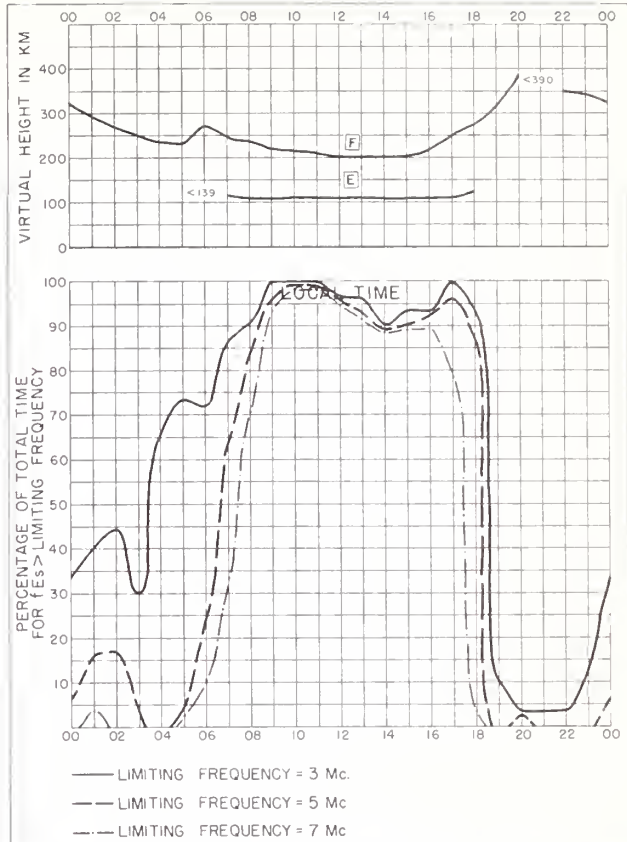


Fig. 18. HUANCAYO, PERU

JANUARY 1960

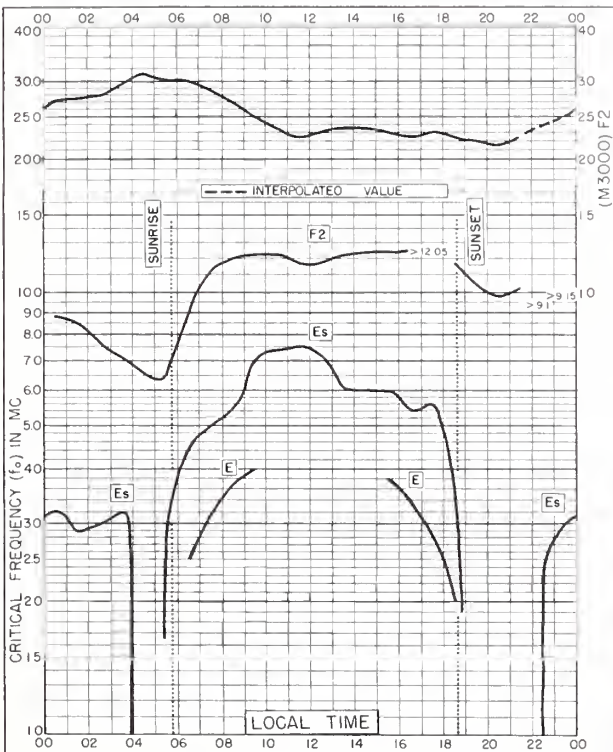


Fig. 19. LA PAZ, BOLIVIA
16.5° S, 68.1° W

JANUARY 1960

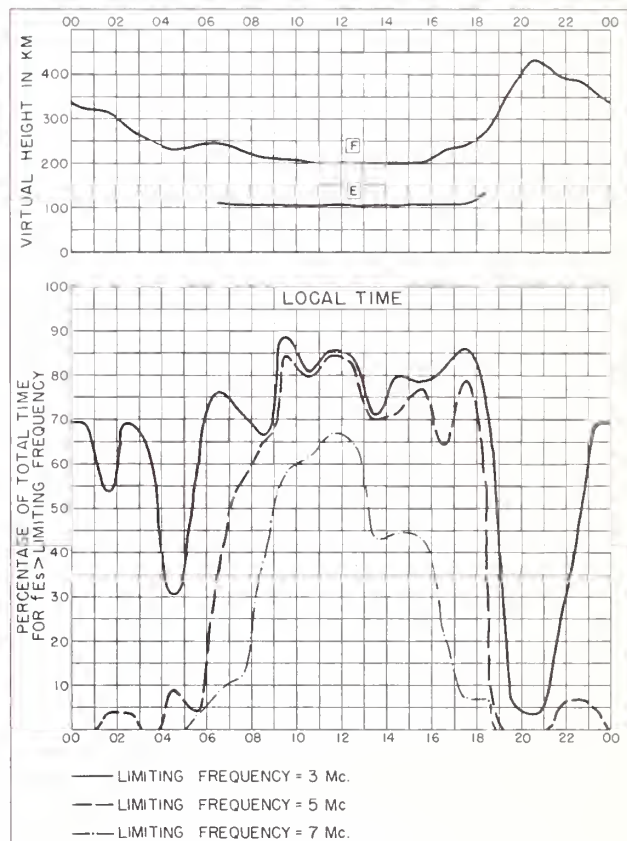


Fig. 20. LA PAZ, BOLIVIA

JANUARY 1960

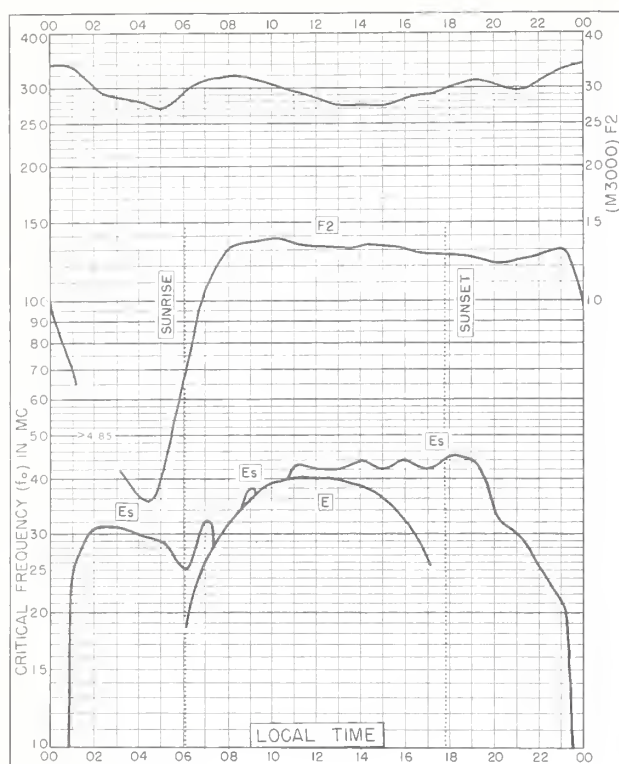


Fig. 21. BOGOTA, COLOMBIA
4.5° N, 74.2° W

DECEMBER 1959

NBS 503

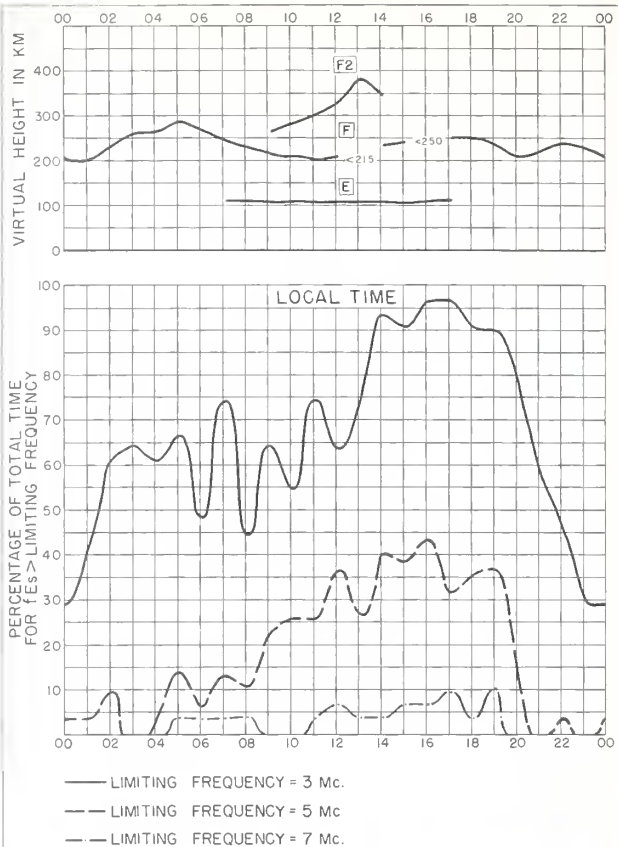


Fig. 22. BOGOTA, COLOMBIA

DECEMBER 1959

NBS 490

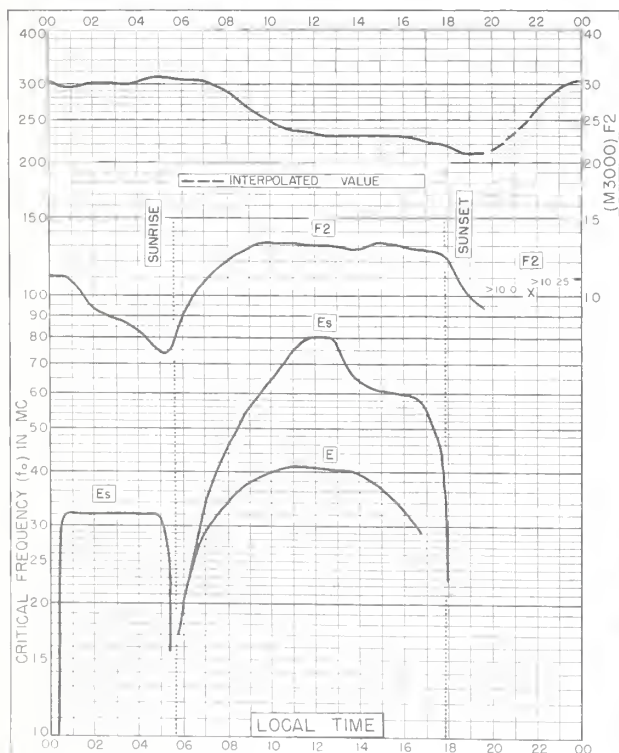


Fig. 23. NATAL, BRAZIL
5.3° S, 35.1° W

NOVEMBER 1959

NBS 513

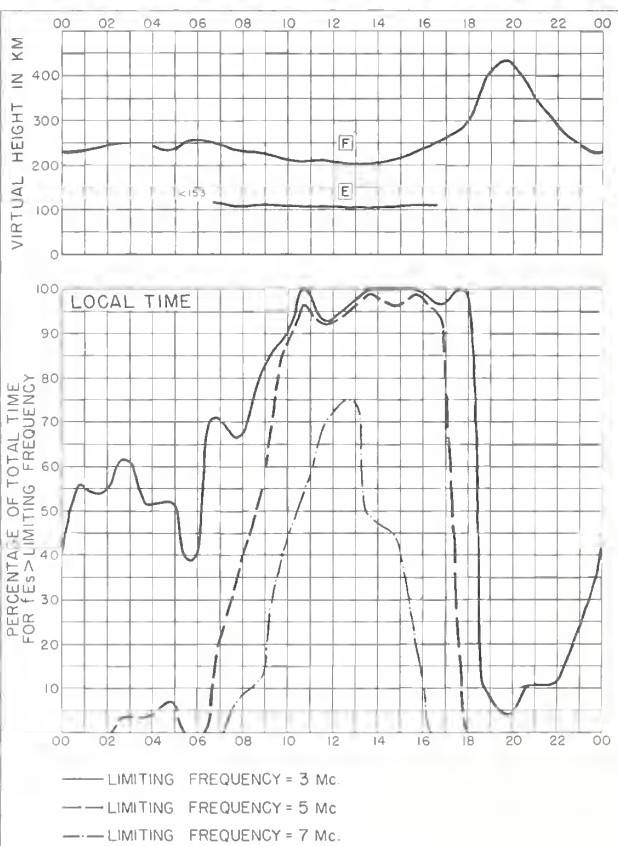


Fig. 24. NATAL, BRAZIL

NOVEMBER 1959

NBS 490

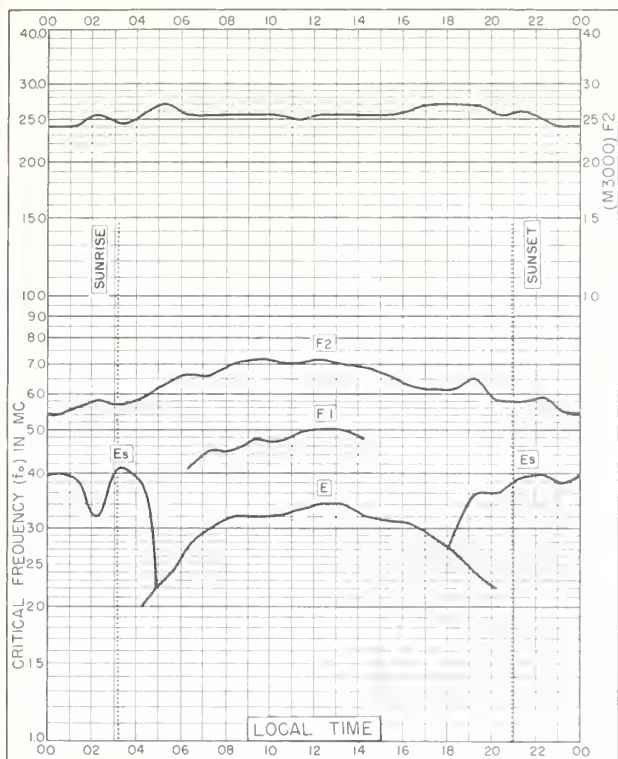


Fig 25. TROMSØ, NORWAY
69.7°N, 19.0°E

AUGUST 1959

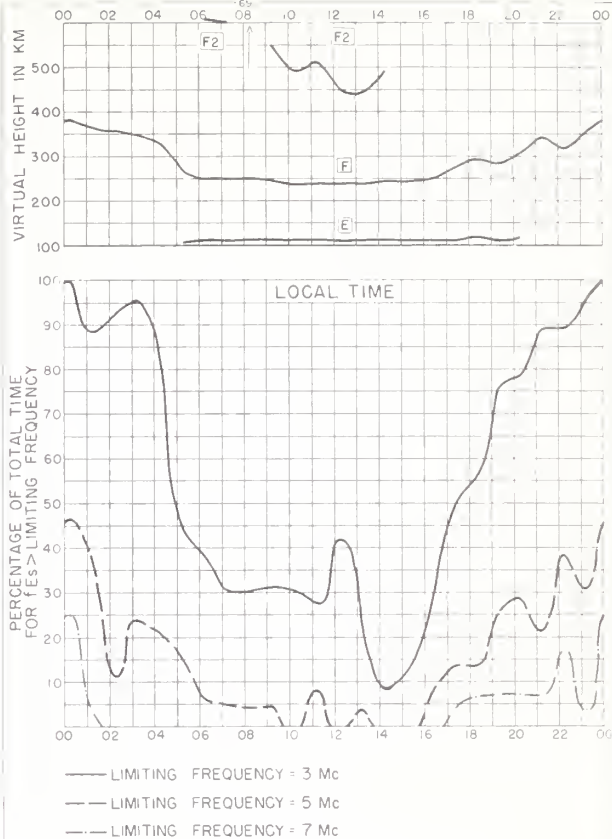


Fig 26. TROMSØ, NORWAY

AUGUST 1959

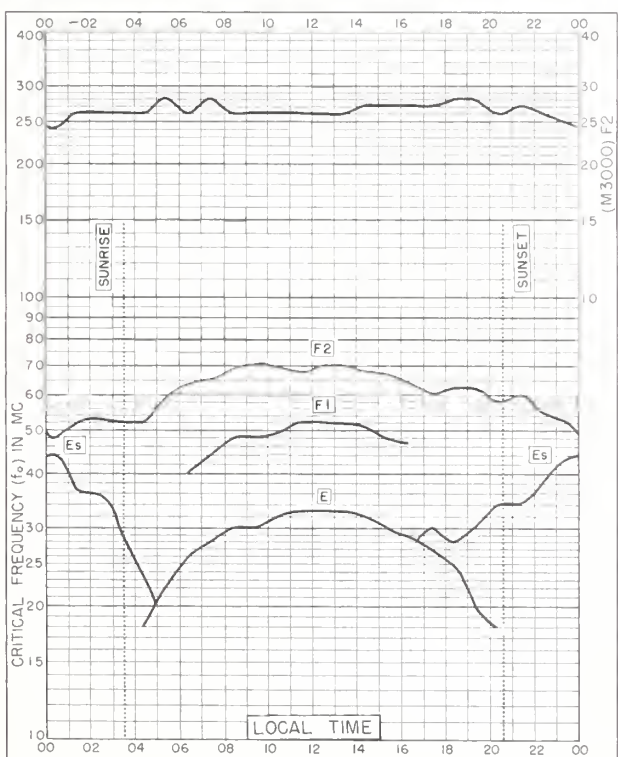


Fig 27. KIRUNA, SWEDEN
67.8°N, 20.3°E

AUGUST 1959

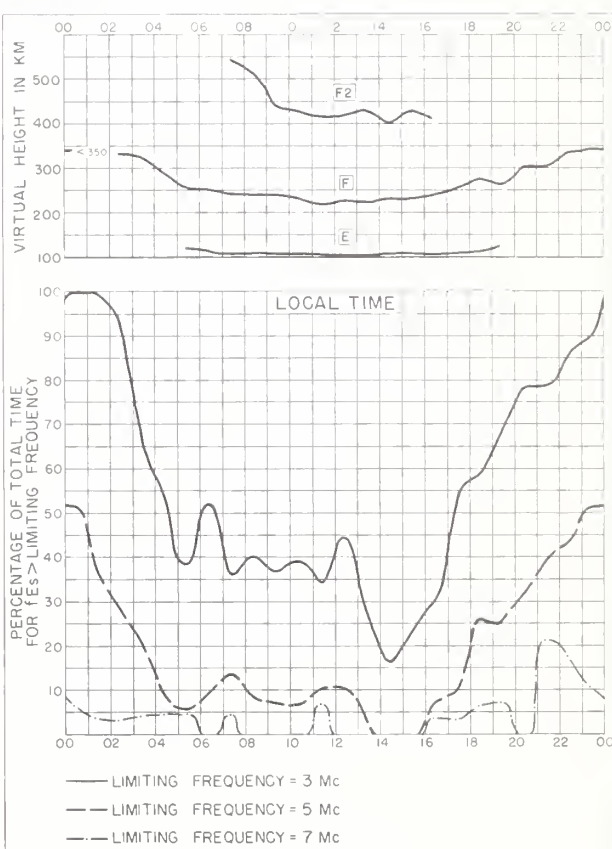
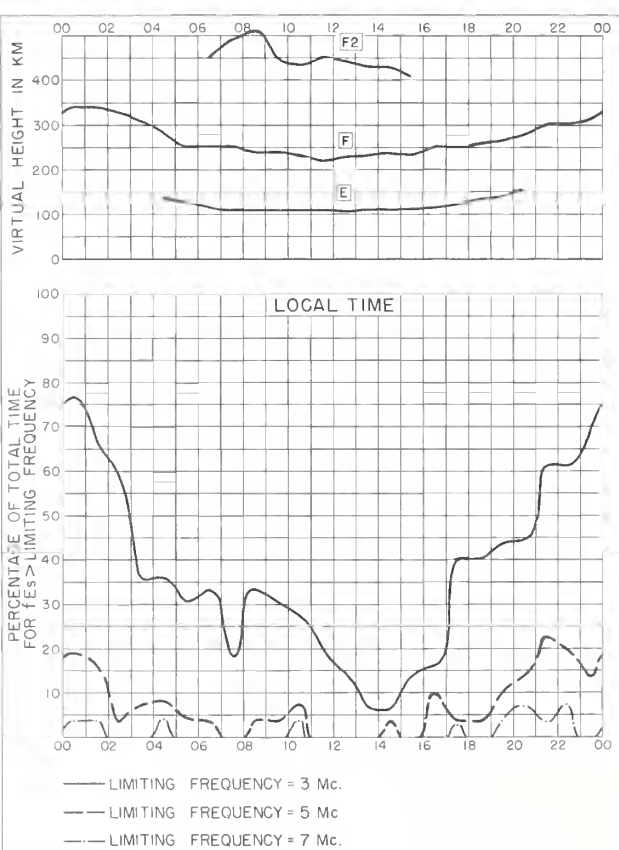
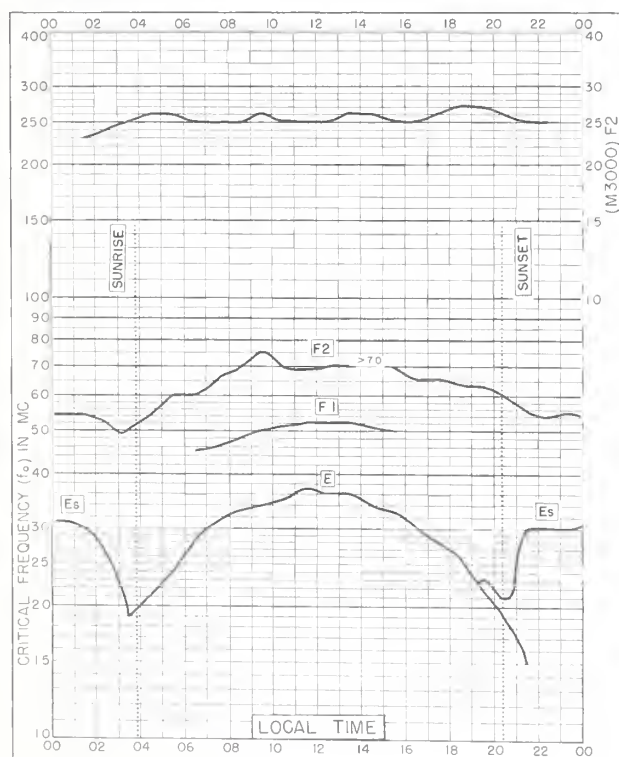
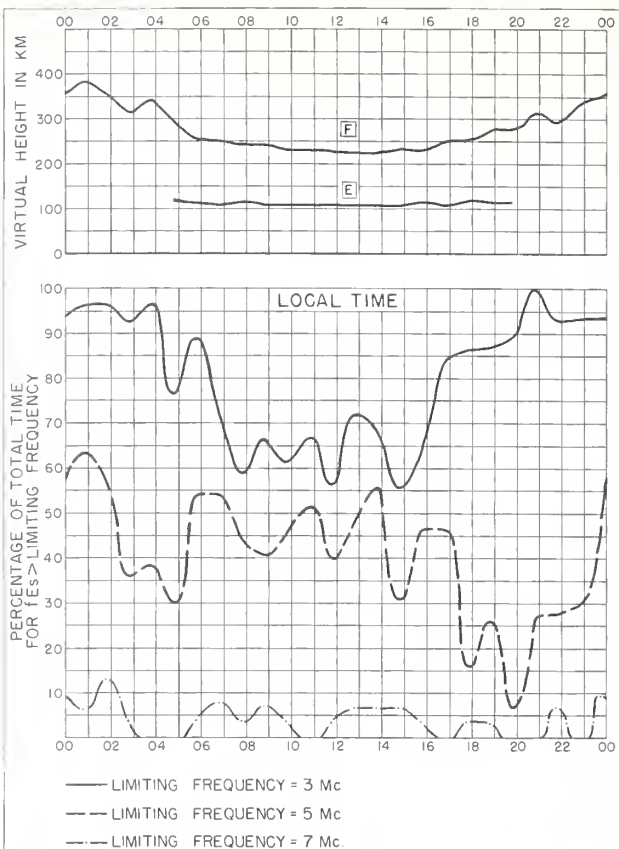
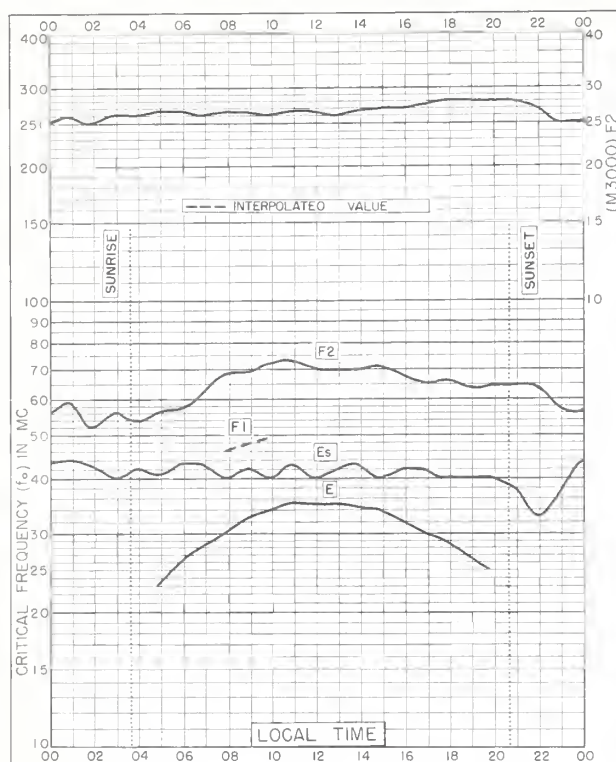


Fig 28. KIRUNA, SWEDEN

AUGUST 1959



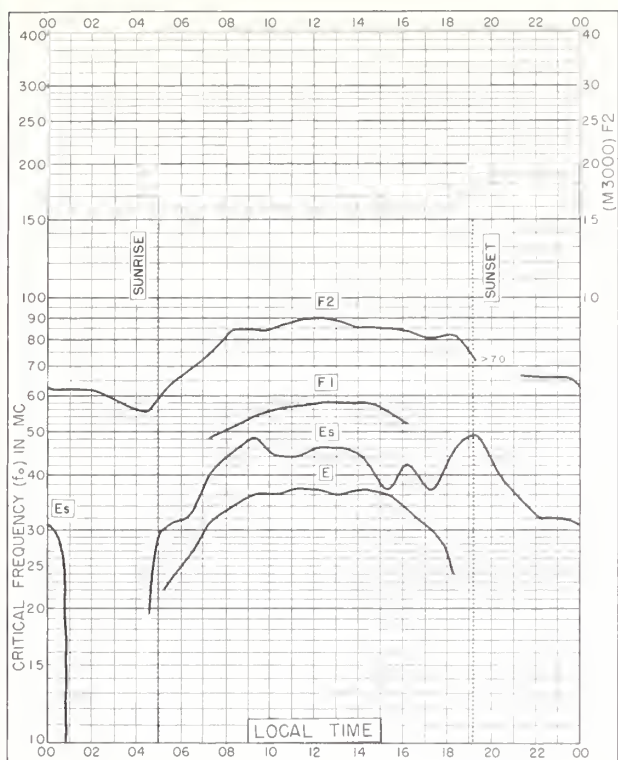


Fig 33. BUDAPEST, HUNGARY
47.4° N, 19.2° E

AUGUST 1959

NBS 503

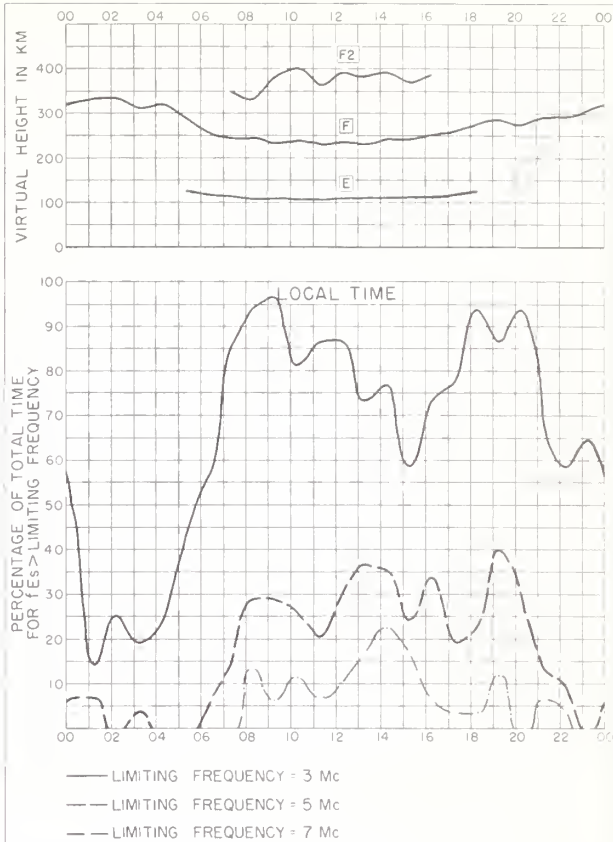


Fig 34. BUDAPEST, HUNGARY

AUGUST 1959

NBS 499

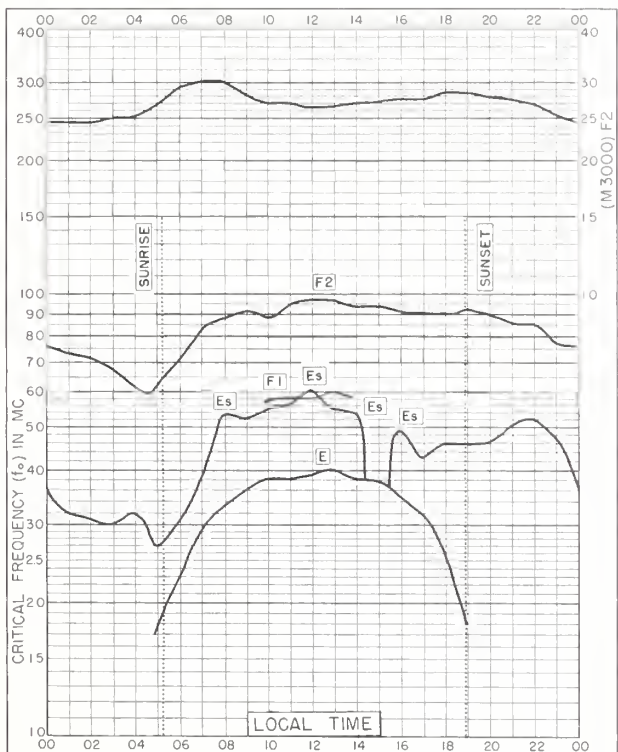


Fig 35. ROME, ITALY
41.8° N, 12.5° E

AUGUST 1959

NBS 503

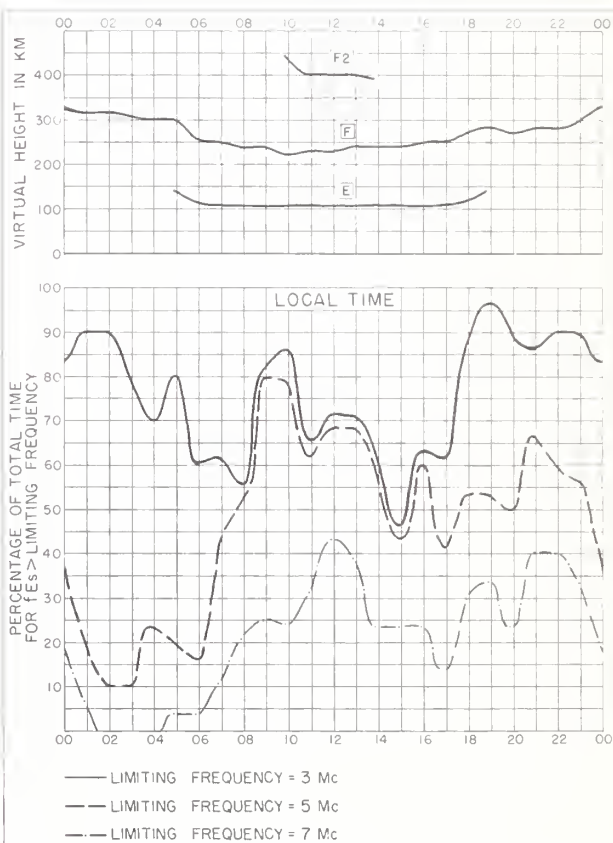


Fig 36. ROME, ITALY

AUGUST 1959

NBS 499

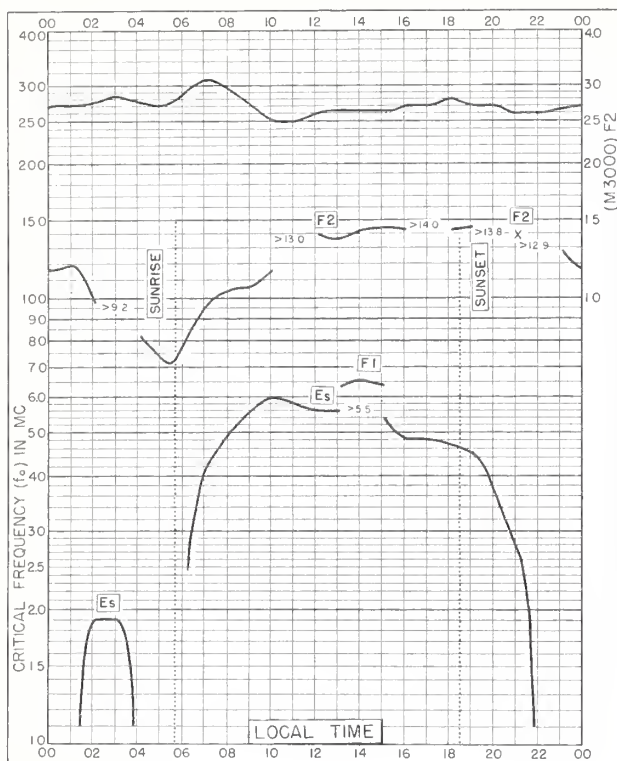


Fig. 37. FORMOSA, CHINA
25.0°N, 121.5°E

AUGUST 1959

NBS 503

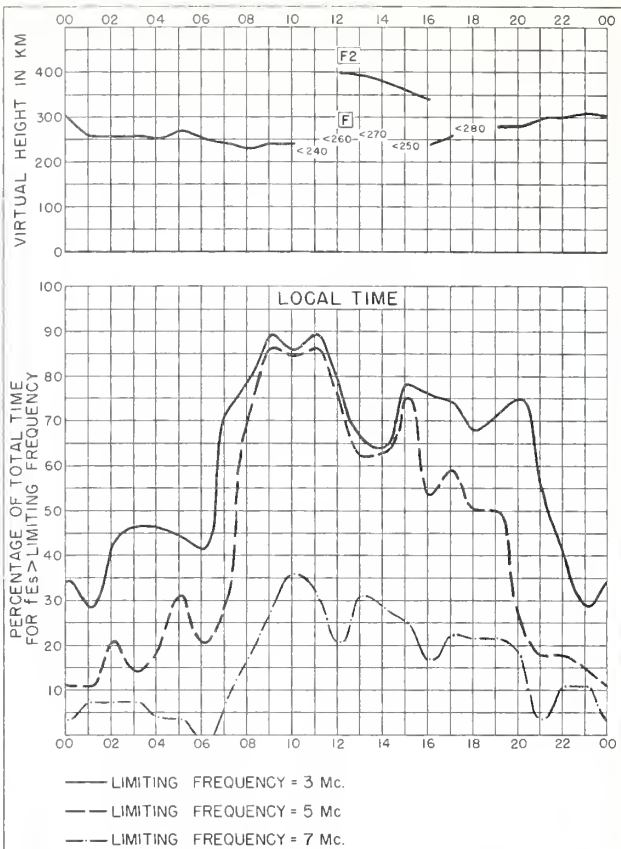


Fig. 38. FORMOSA, CHINA

AUGUST 1959

NBS 490

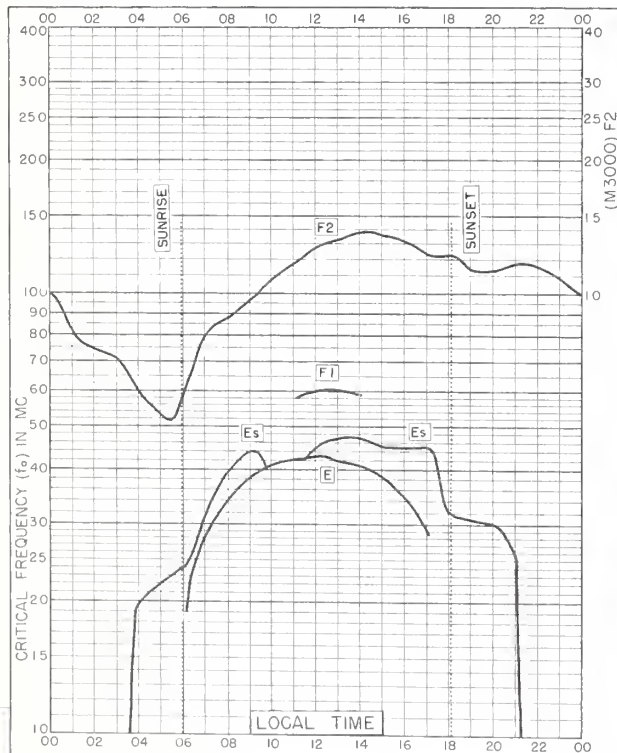


Fig. 39. BOGOTA, COLOMBIA
45°N, 74.2°W

AUGUST 1959

NBS 503

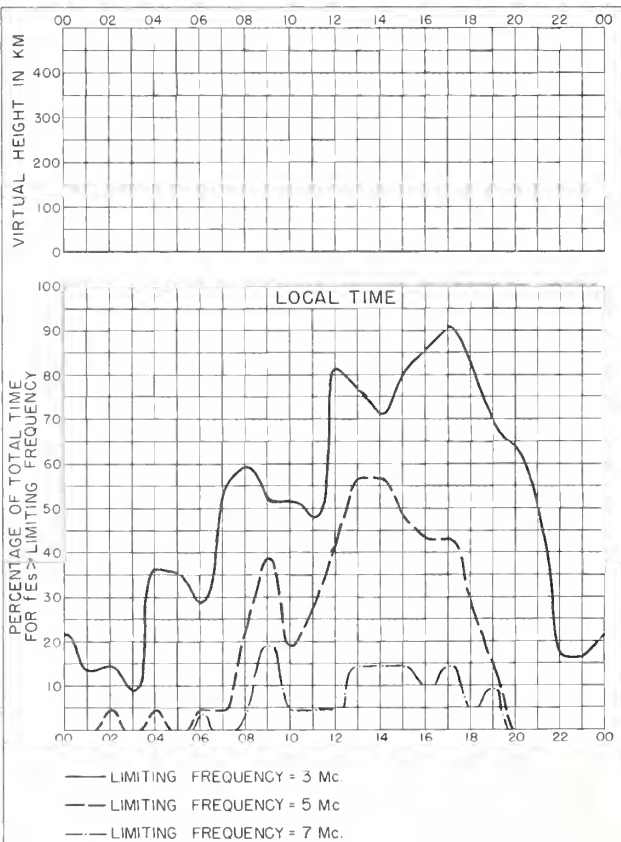


Fig. 40. BOGOTA, COLOMBIA

AUGUST 1959

NBS 490

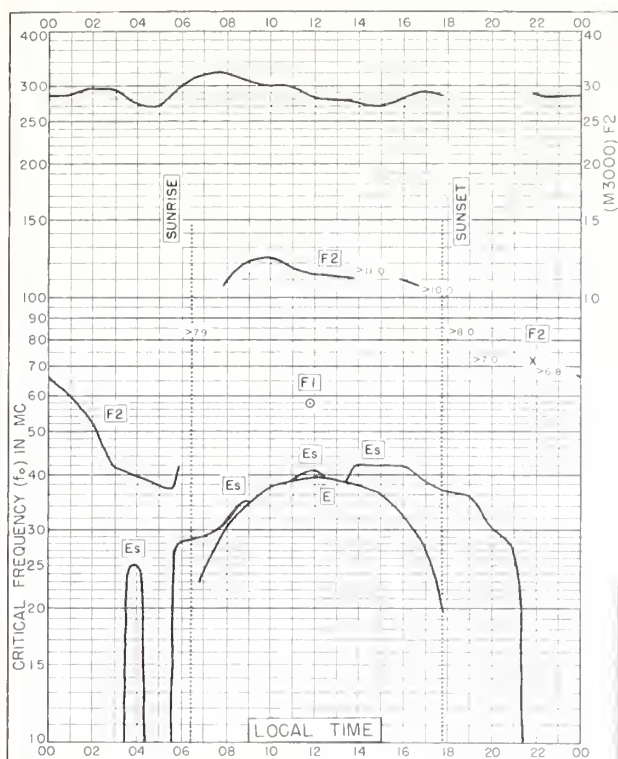


Fig. 41. TOWNSVILLE, AUSTRALIA
19.3°S, 146.7°E
AUGUST 1959

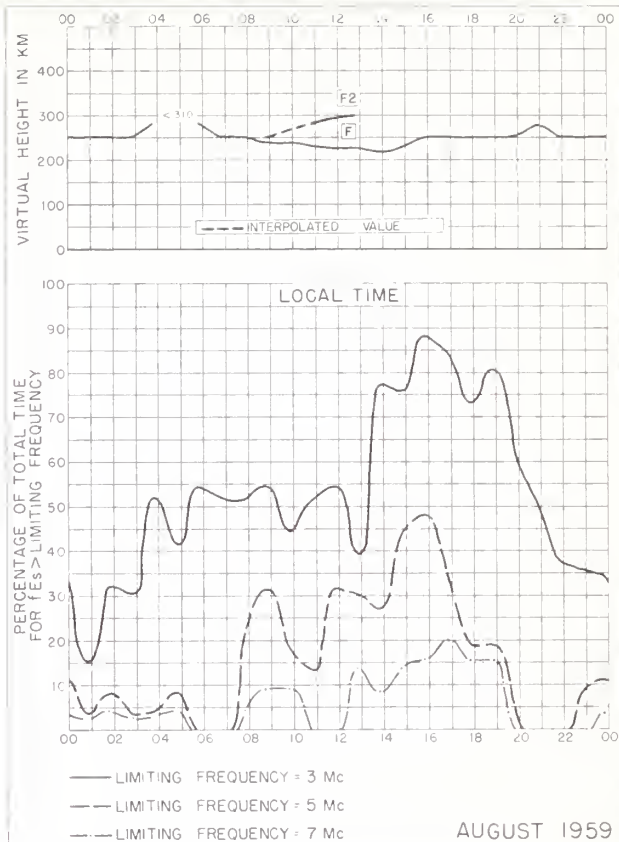


Fig. 42. TOWNSVILLE, AUSTRALIA



Fig. 43. BRISBANE, AUSTRALIA
27.5°S, 152.9°E
AUGUST 1959

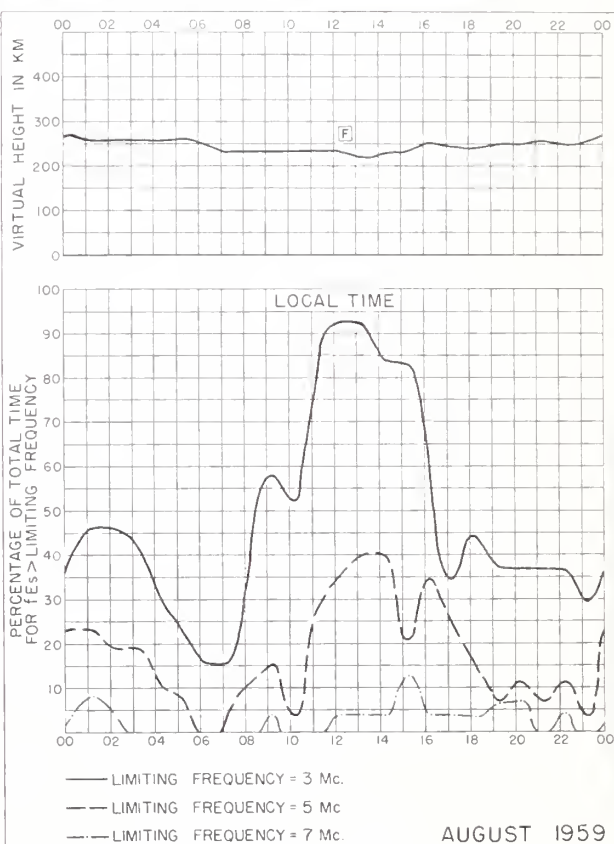
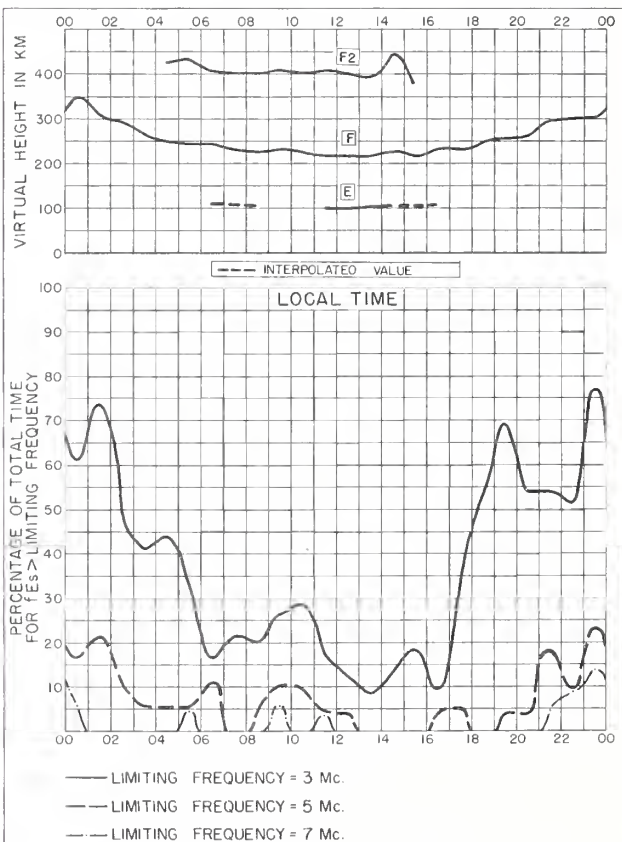
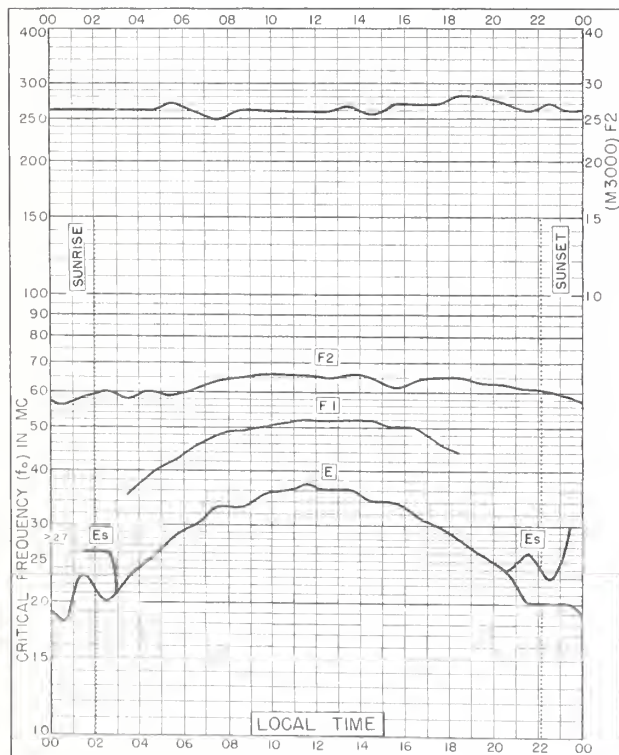
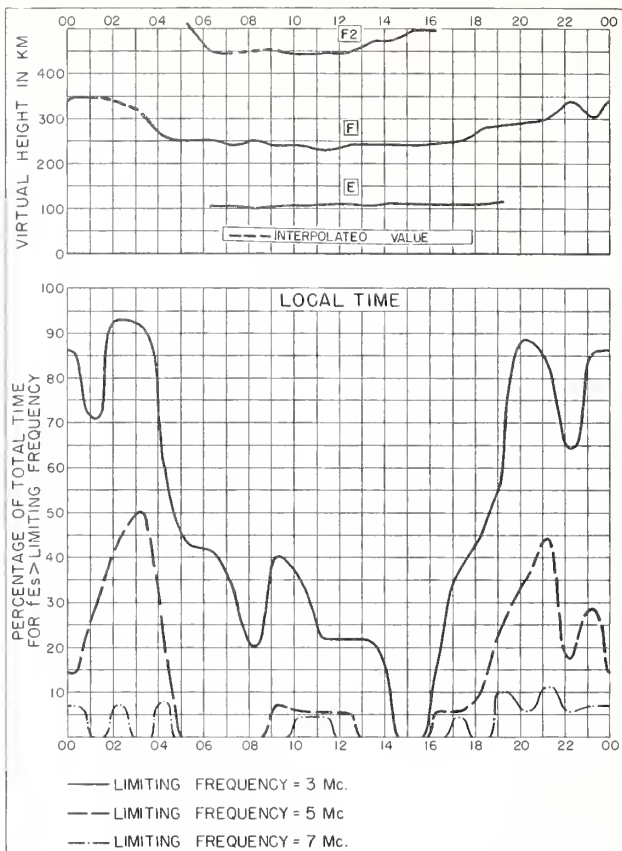
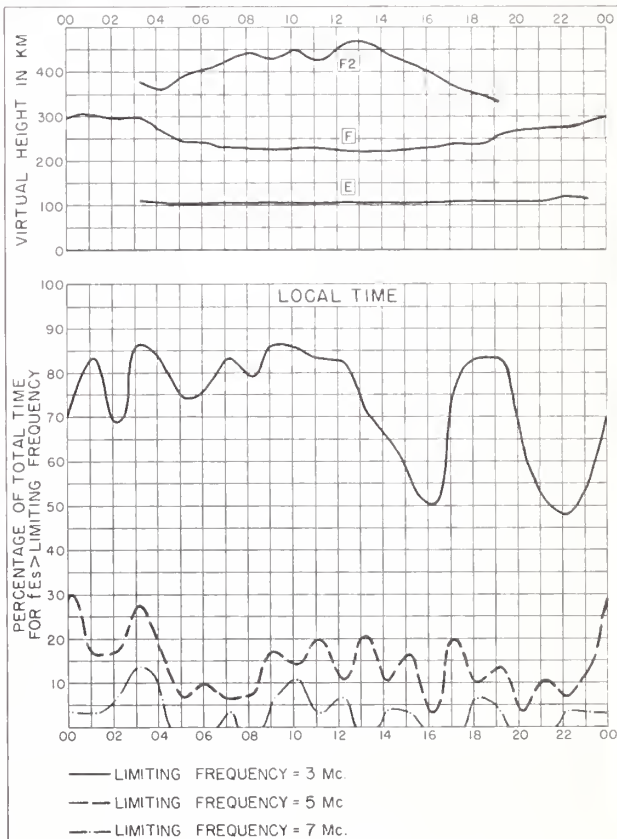
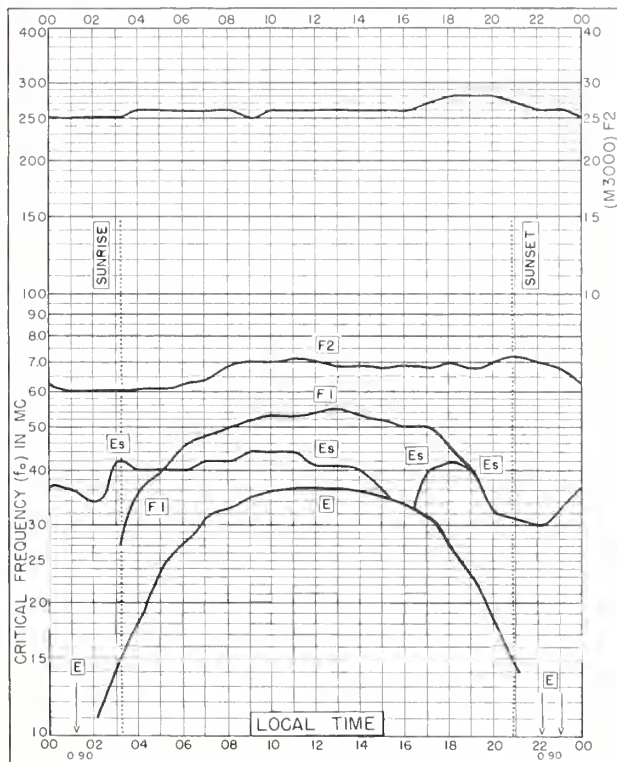
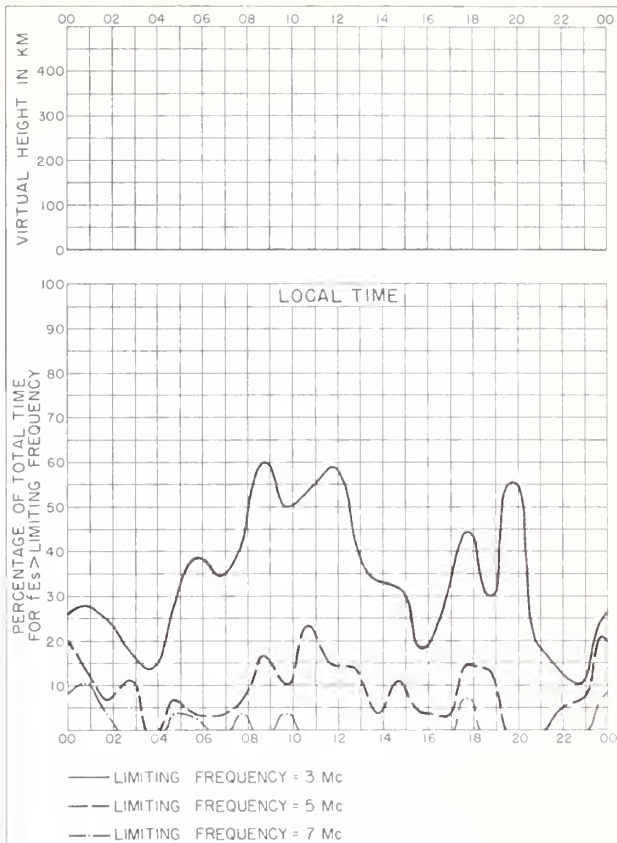
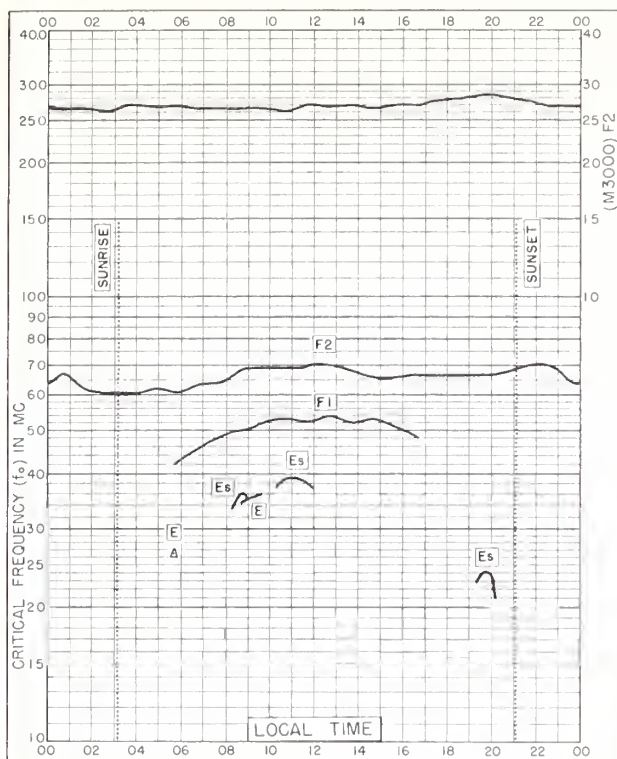


Fig. 44. BRISBANE, AUSTRALIA





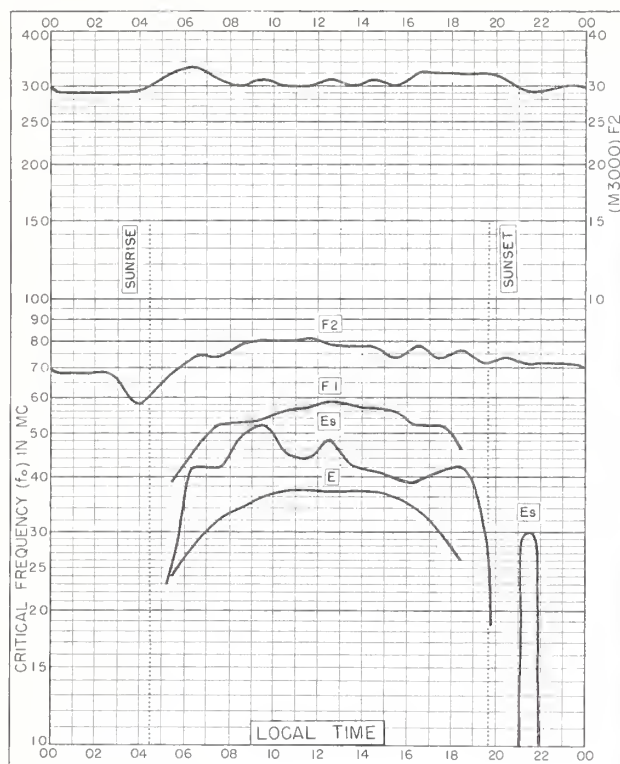


Fig. 53. SOTTENS, SWITZERLAND
46.6°N, 6.7°E

JULY 1959

NBS 503

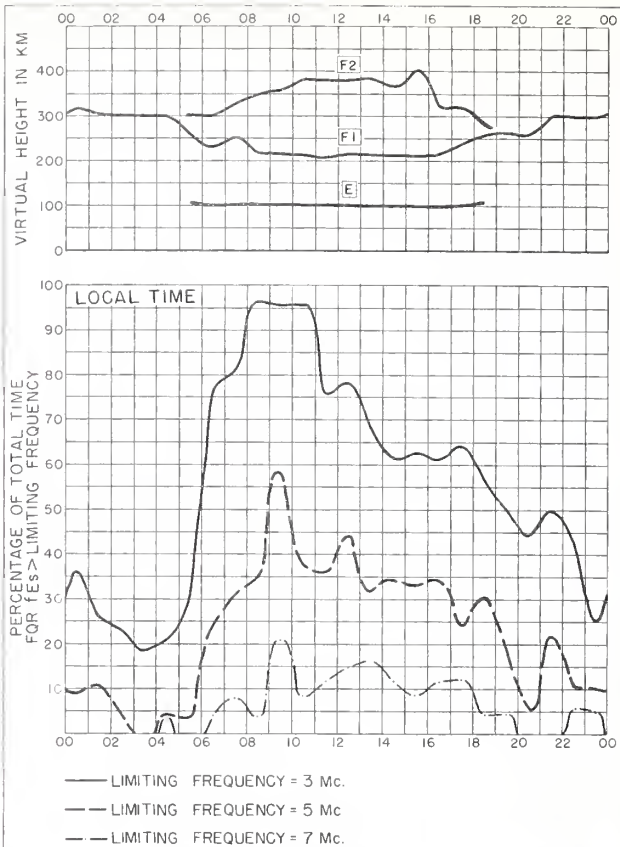


Fig. 54. SOTTENS, SWITZERLAND

JULY 1959

NBS 490

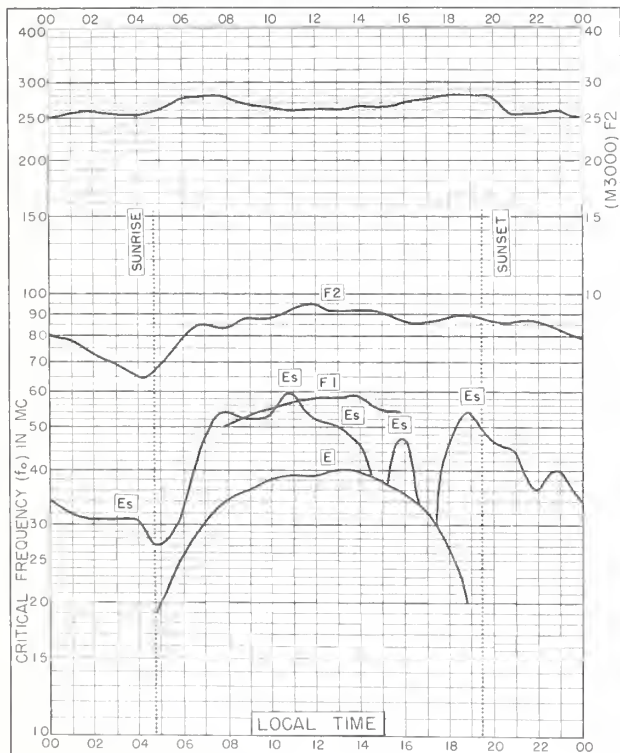


Fig. 55. ROME, ITALY
41.8°N, 12.5°E

JULY 1959

NBS 503

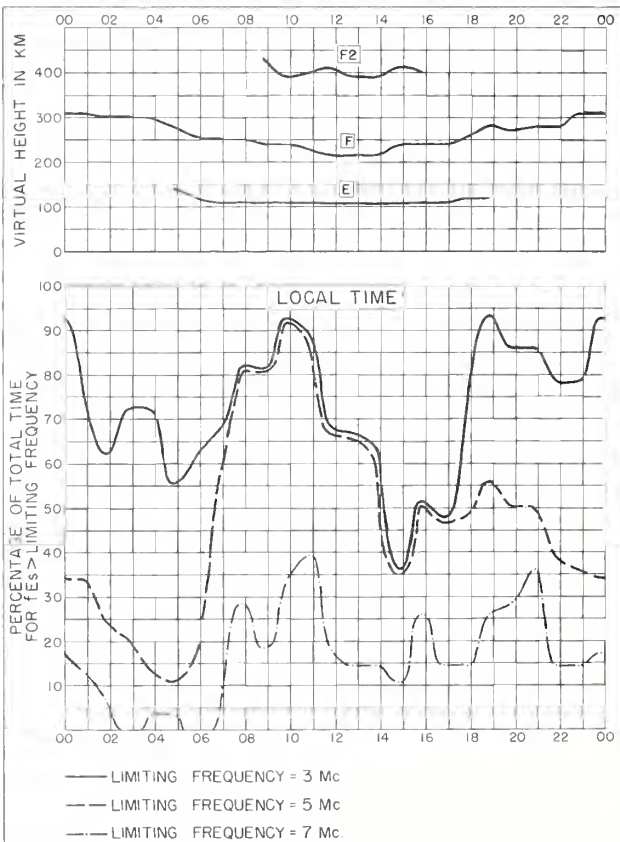
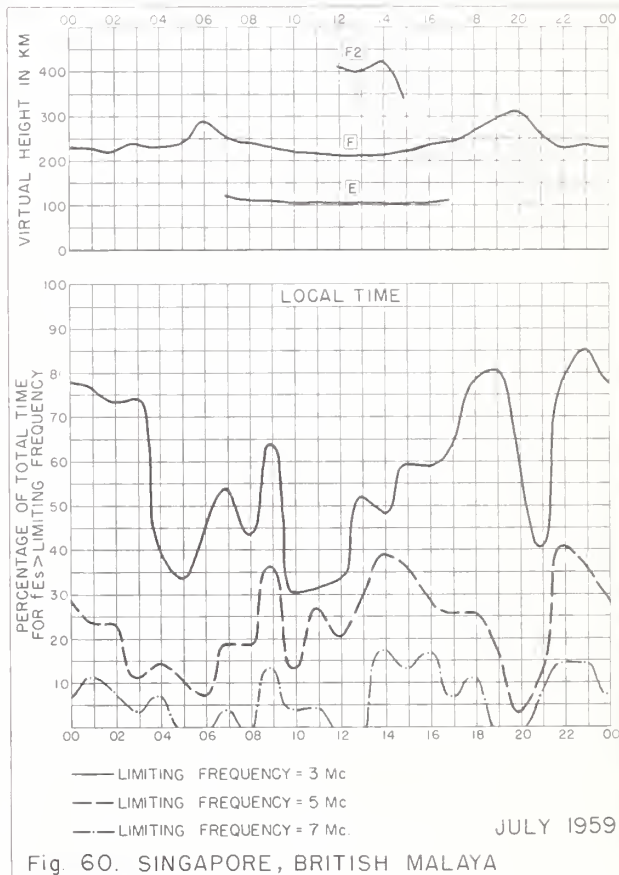
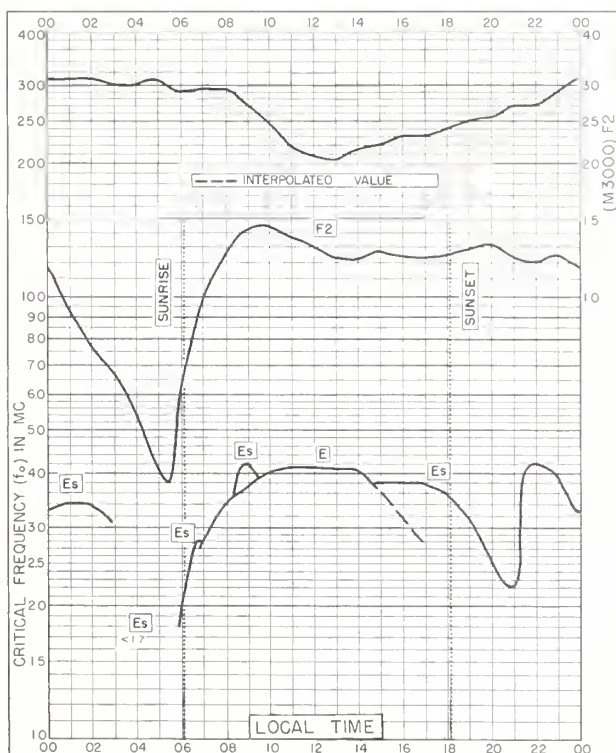
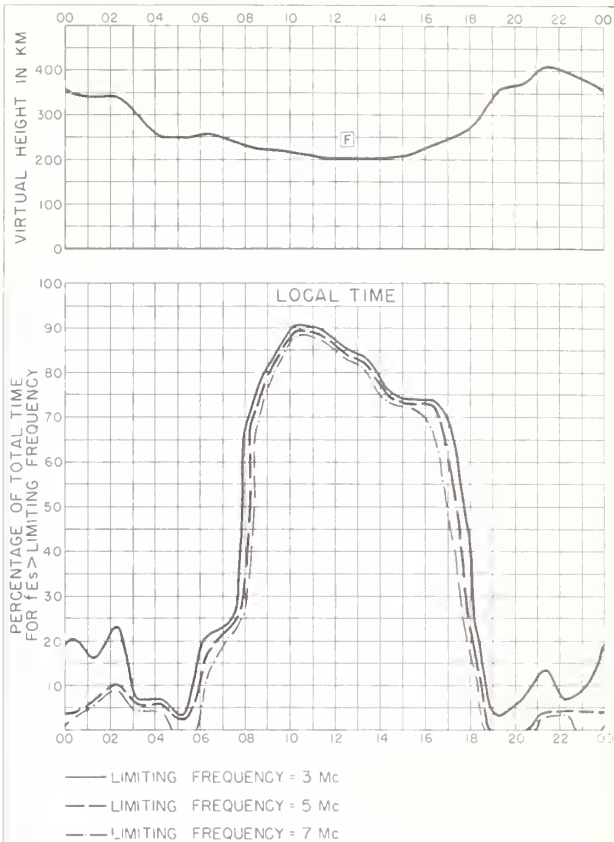


Fig. 56. ROME, ITALY

JULY 1959

NBS 490



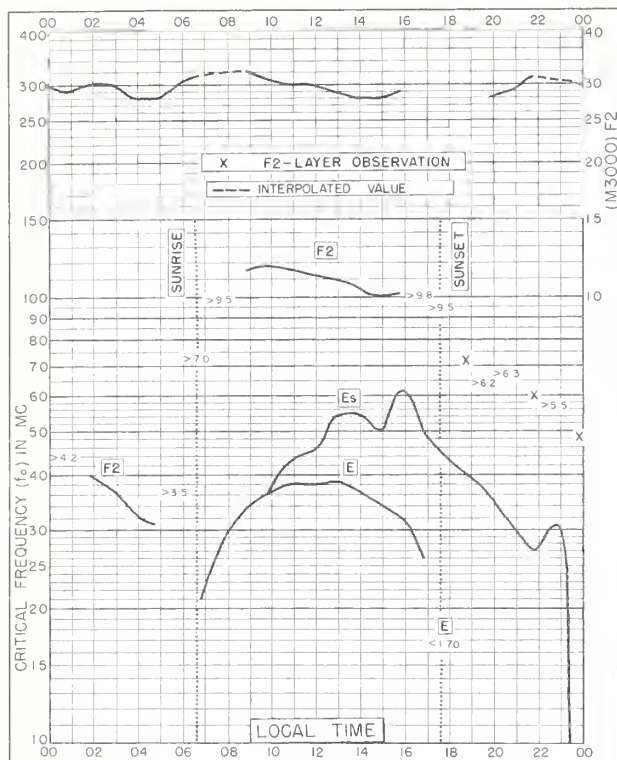


Fig 61. TOWNSVILLE, AUSTRALIA
193° S, 146.7° E JULY 1959

NBS 503

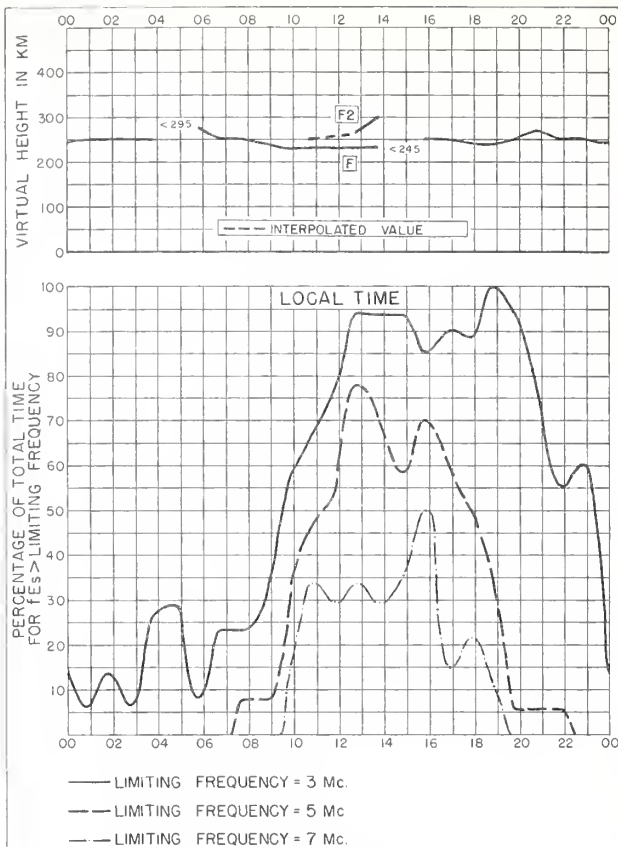


Fig 62. TOWNSVILLE, AUSTRALIA JULY 1959

NBS 490

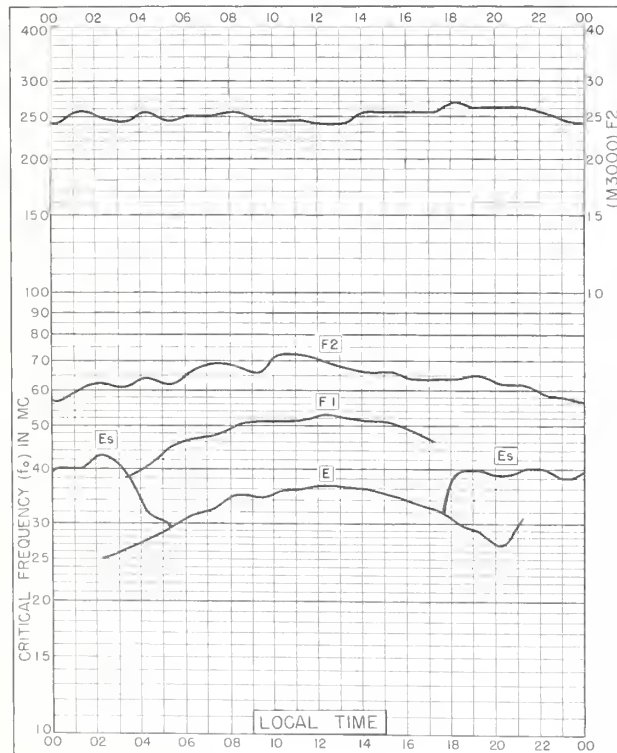


Fig 63. TROMSØ, NORWAY
69.7° N, 19.0° E JUNE 1959

NBS 503

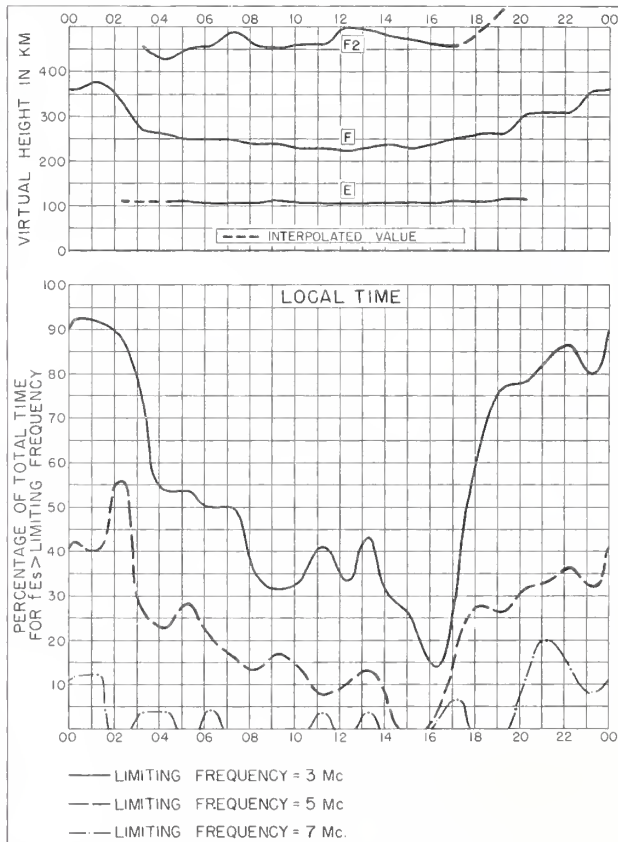
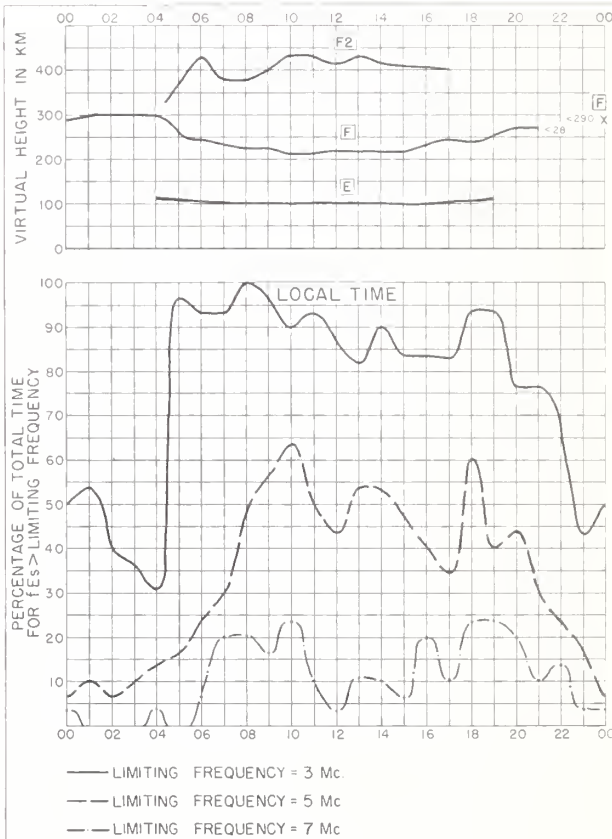
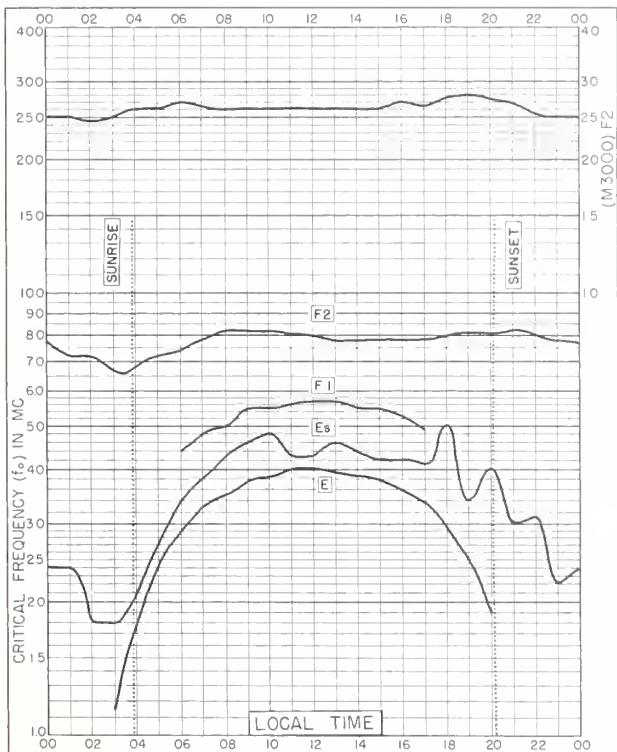
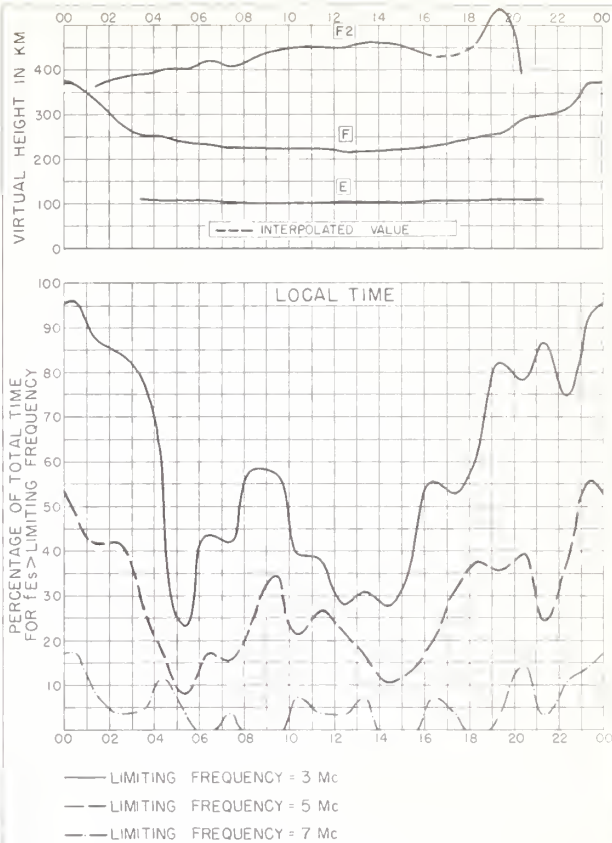
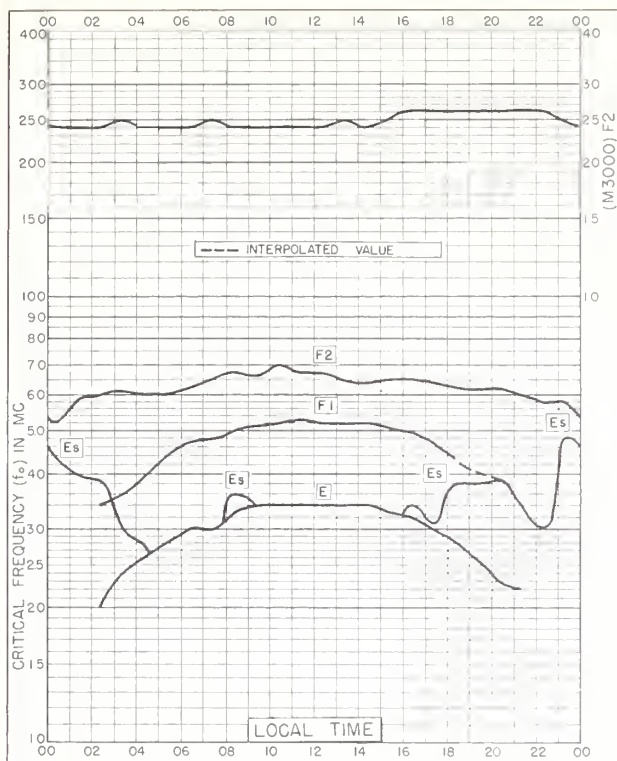


Fig 64. TROMSØ, NORWAY JUNE 1959

NBS 490



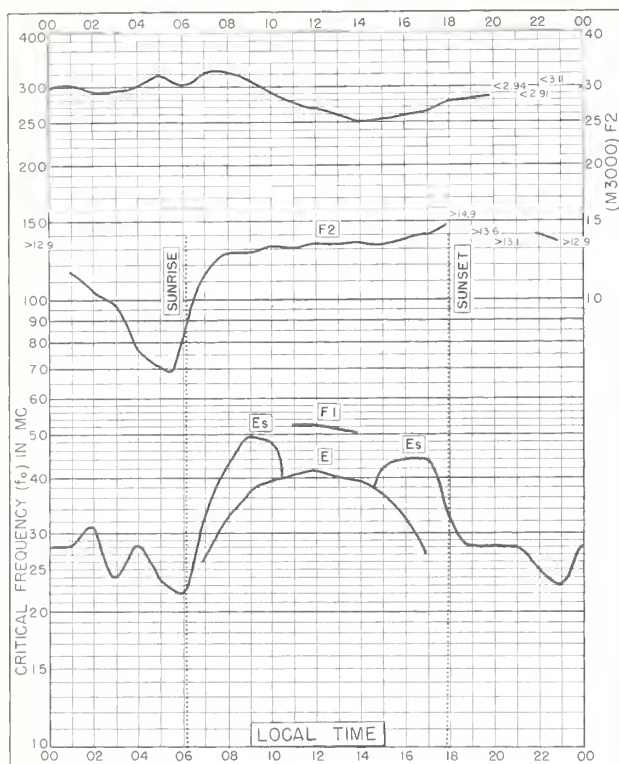


Fig. 69. LWIRO, BELGIAN CONGO
2.3°S, 28.8°E

JUNE 1959

NBS 503

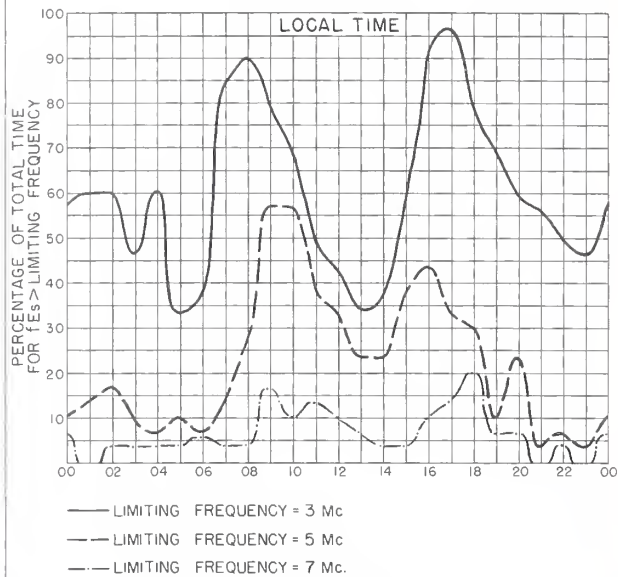
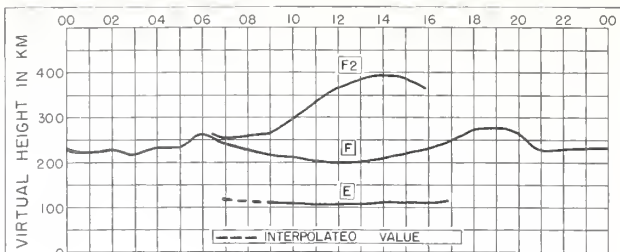


Fig. 70. LWIRO, BELGIAN CONGO

JUNE 1959

NBS 490

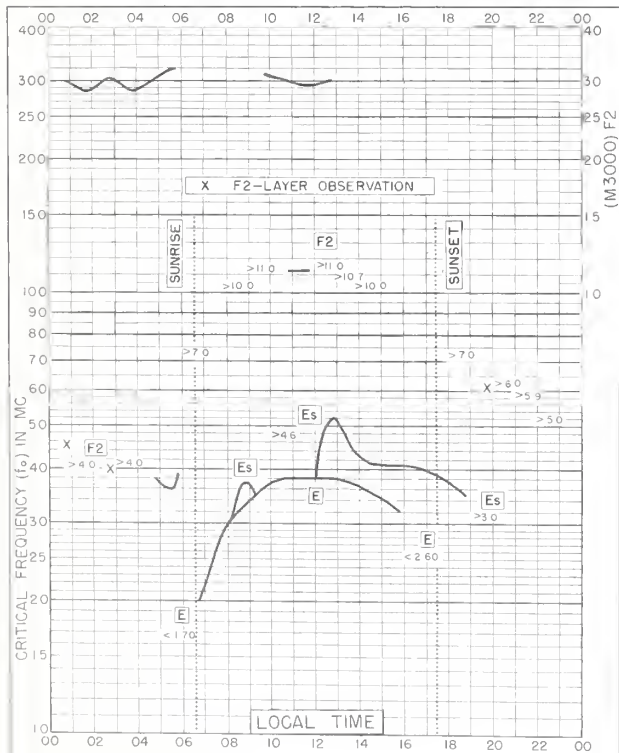


Fig. 71. TOWNVILLE, AUSTRALIA
19.3°S, 146.7°E

JUNE 1959

NBS 503

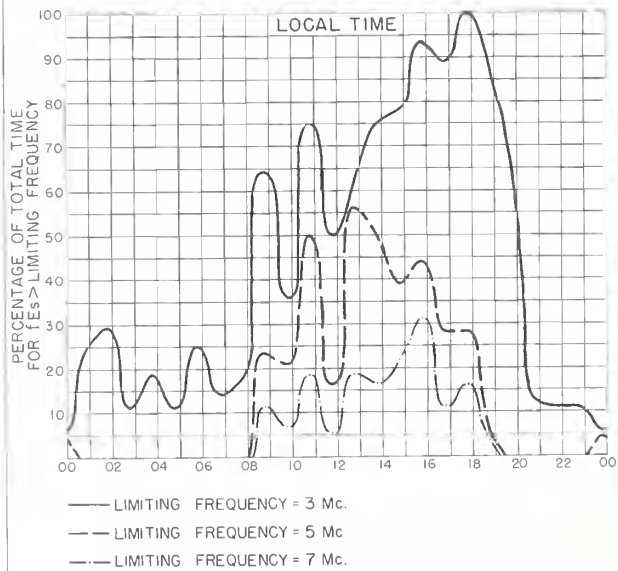
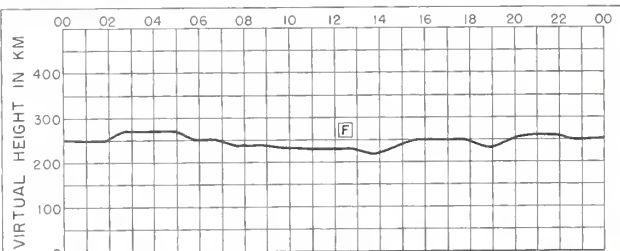


Fig. 72. TOWNVILLE, AUSTRALIA

JUNE 1959

NBS 490

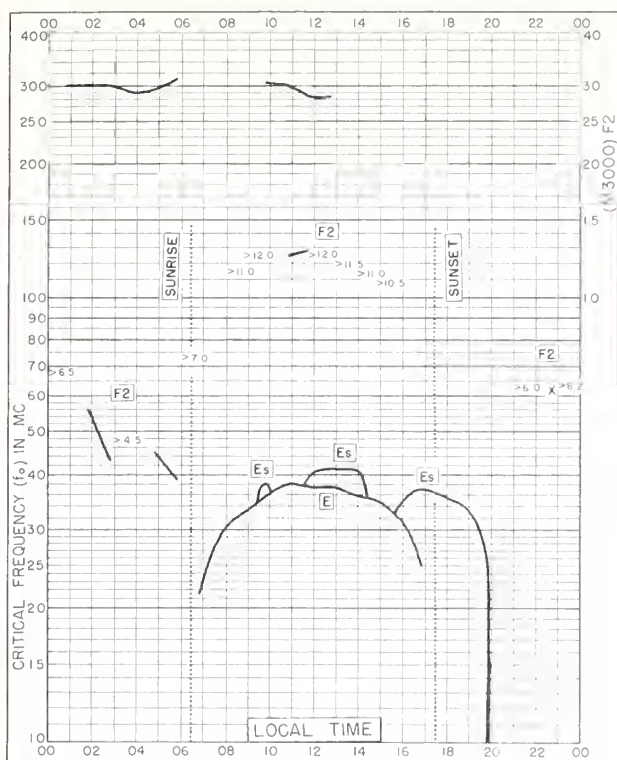


Fig 73. TOWNSVILLE, AUSTRALIA
19 3° S, 146.7° E

MAY 1959

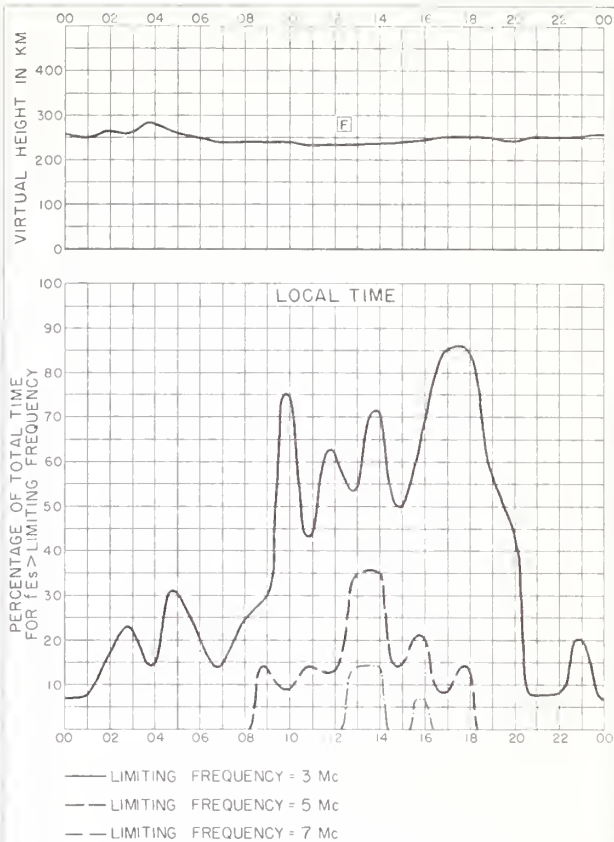


Fig 74. TOWNSVILLE, AUSTRALIA

MAY 1959

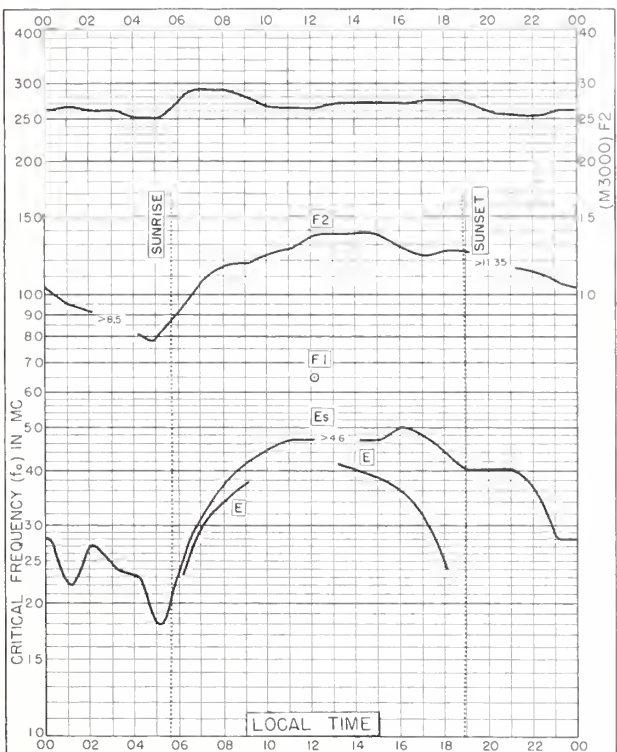


Fig. 75. CONCEPCION, CHILE
36.6°S.73.0°W

FEBRUARY 1959

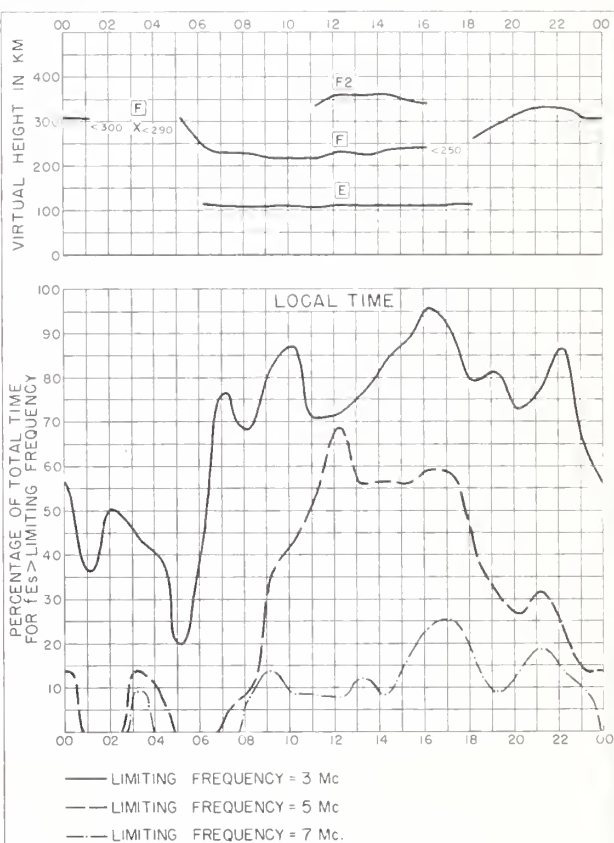


Fig. 76. CONCEPCION, CHILE

FEBRUARY 1959

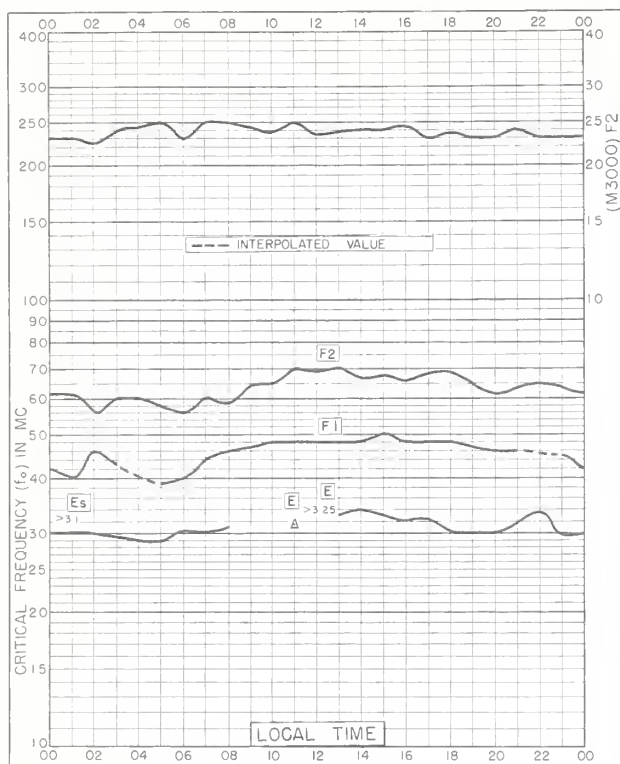


Fig. 77. BYRD STATION
80.0° S, 120.0° W JANUARY 1959

NBS 503

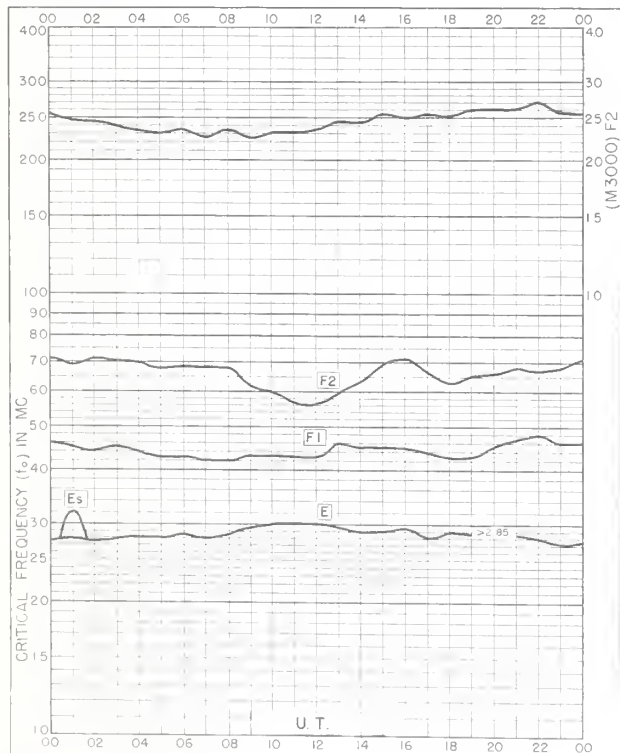


Fig. 79. POLE STATION
90.0° S NOVEMBER 1958

NBS 503

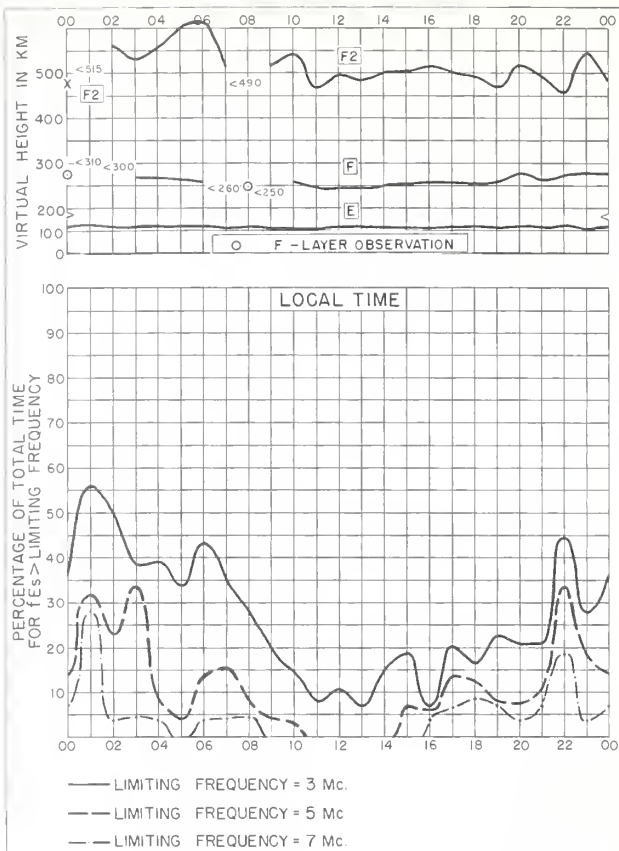


Fig. 78. BYRD STATION JANUARY 1959

NBS 490

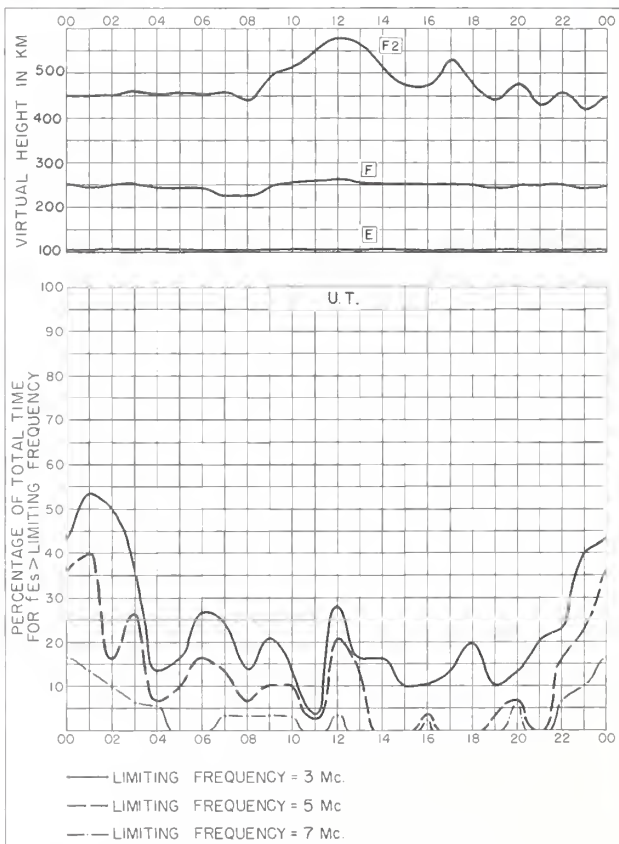


Fig. 80. POLE STATION NOVEMBER 1958

NBS 490

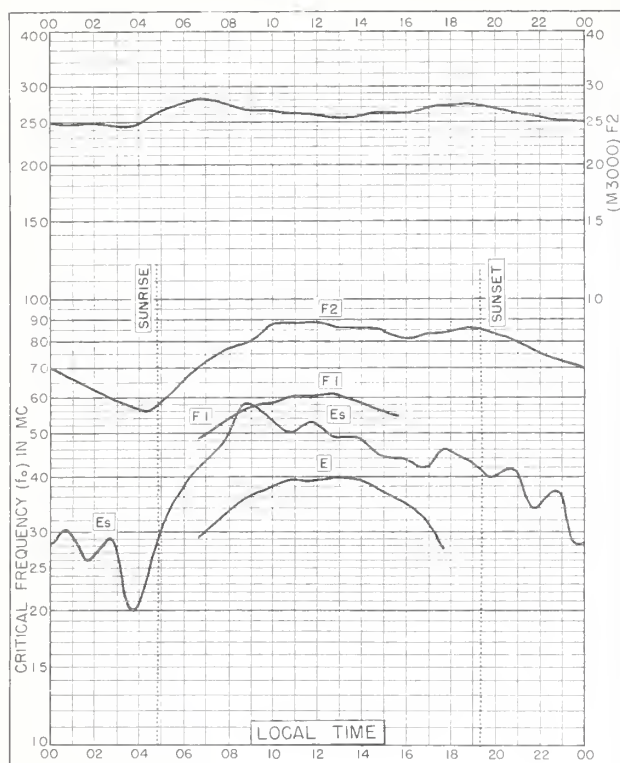


Fig. 85. LINDAU/HARZ, GERMANY
51.6°N, 10.1°E
AUGUST 1958

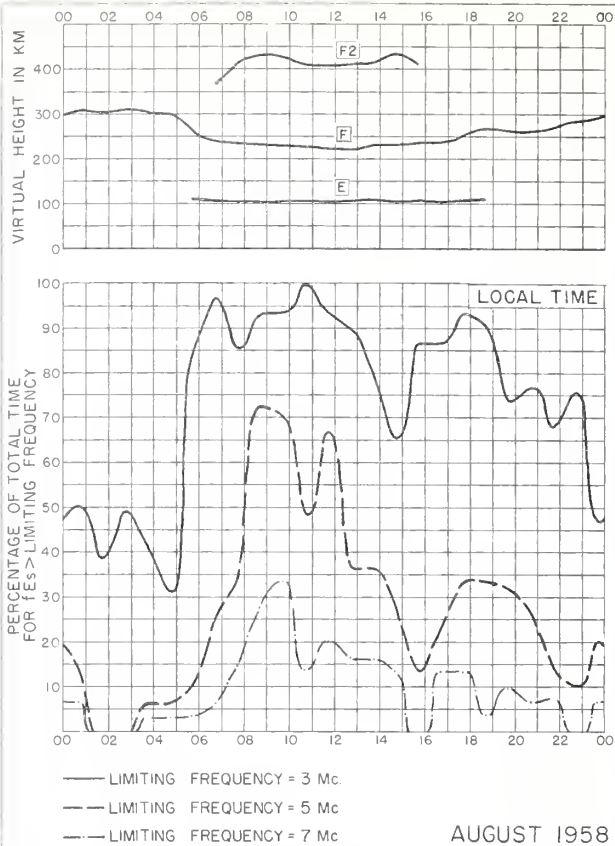


Fig. 86. LINDAU/HARZ, GERMANY

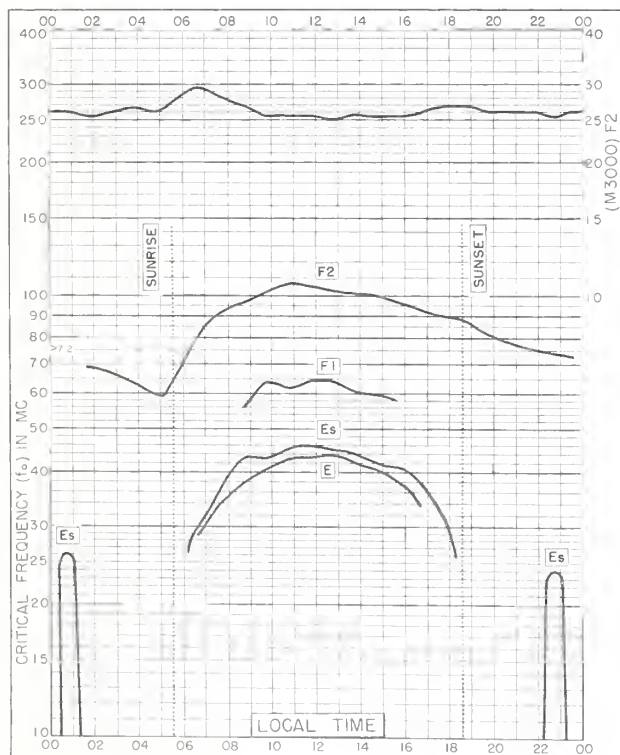


Fig. 87. CAPE CANAVERAL, FLORIDA
28.4°N, 80.6°W
AUGUST 1958

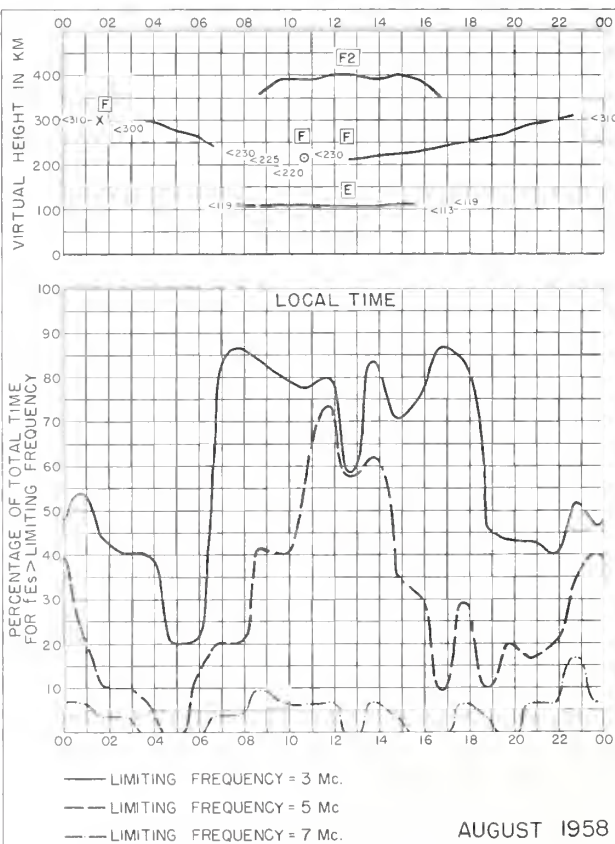


Fig. 88. CAPE CANAVERAL, FLORIDA

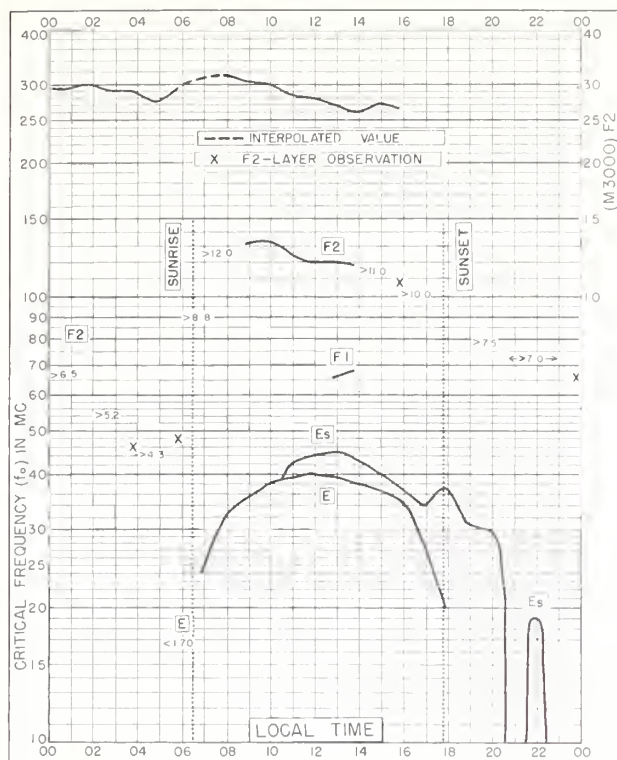


Fig 89. TOWNSVILLE, AUSTRALIA
19.3°S, 146.7°E

AUGUST 1958

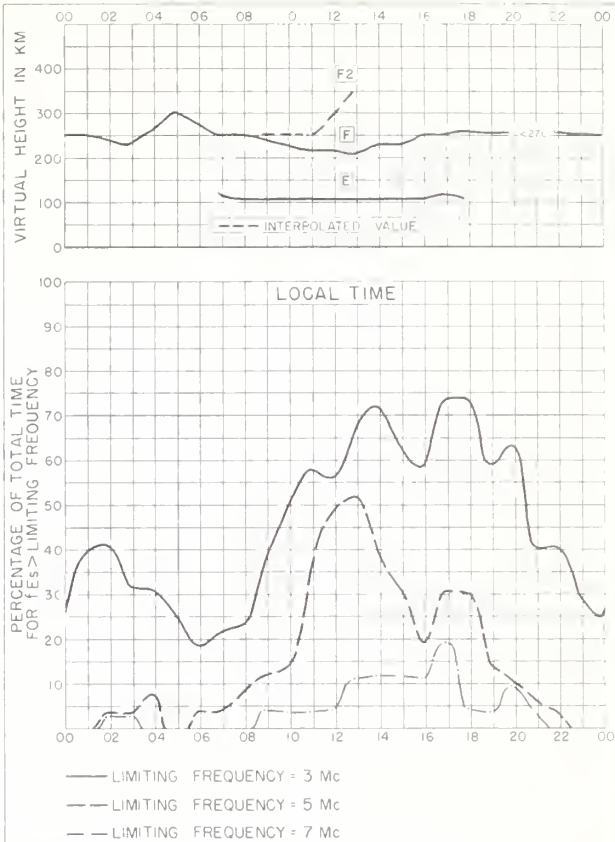


Fig 90. TOWNSVILLE, AUSTRALIA AUGUST 1958

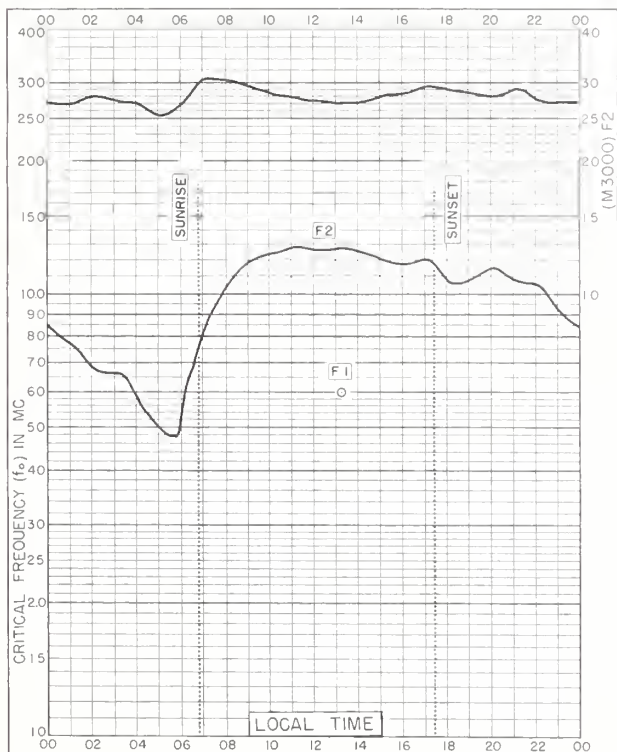


Fig 91. BUENOS AIRES, ARGENTINA
34.5°S, 58.5°W

AUGUST 1958

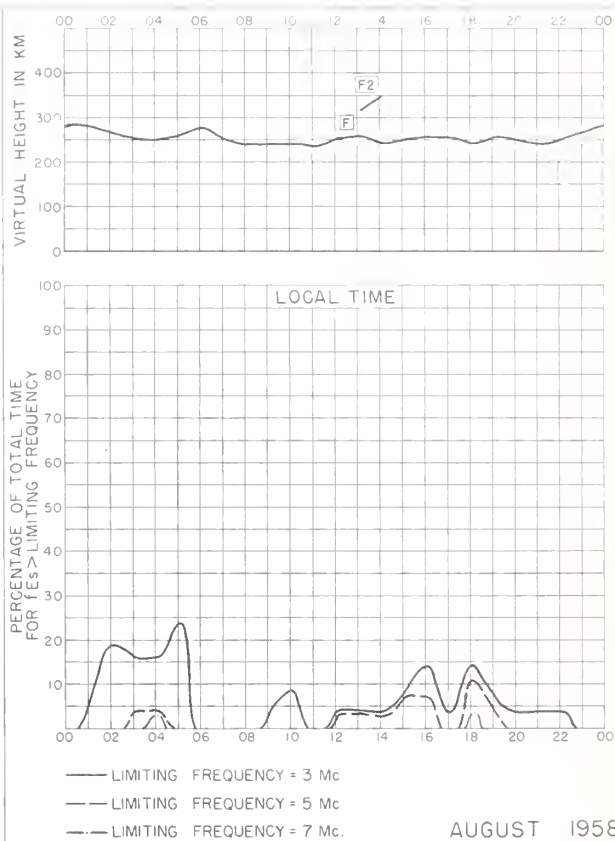


Fig 92. BUENOS AIRES, ARGENTINA

AUGUST 1958

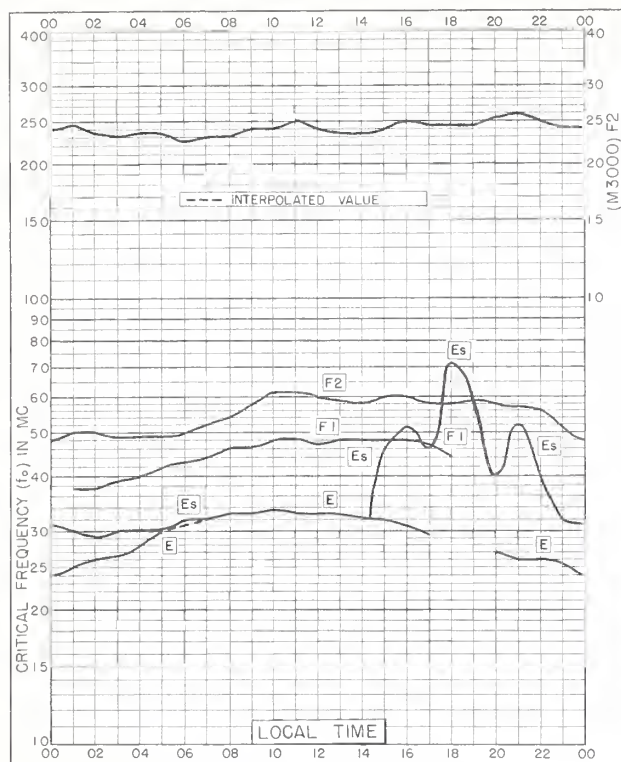


Fig. 93. SVALBARD, NORWAY
78.2° N, 15.7° E

JULY 1958

NBS 503

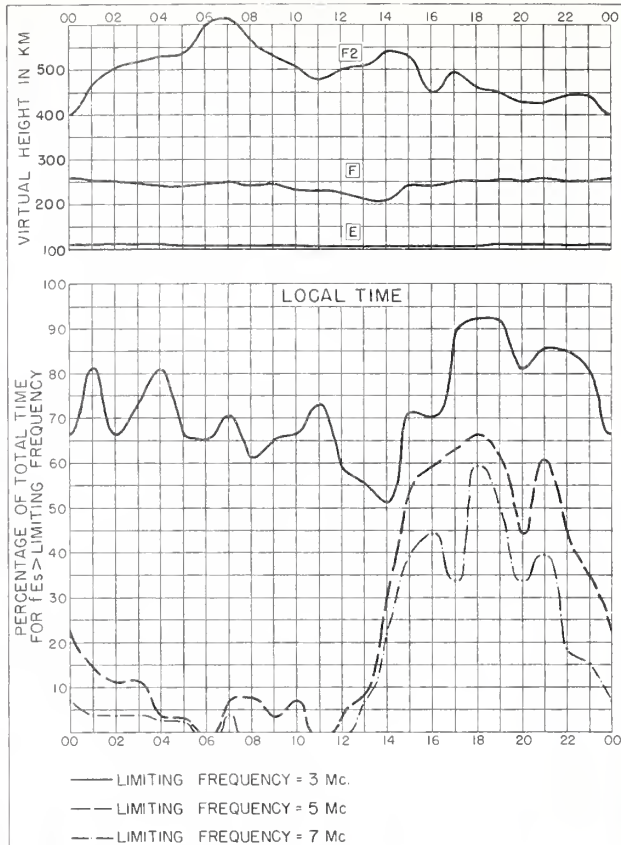


Fig. 94. SVALBARD, NORWAY

JULY 1958

NBS 490

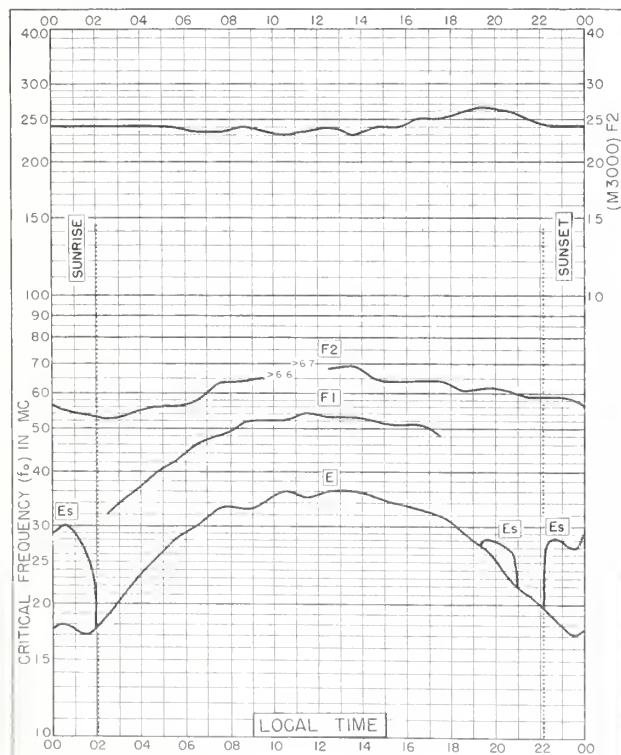


Fig. 95. LULEA, SWEDEN
65.6° N, 22.1° E

JULY 1958

NBS 505

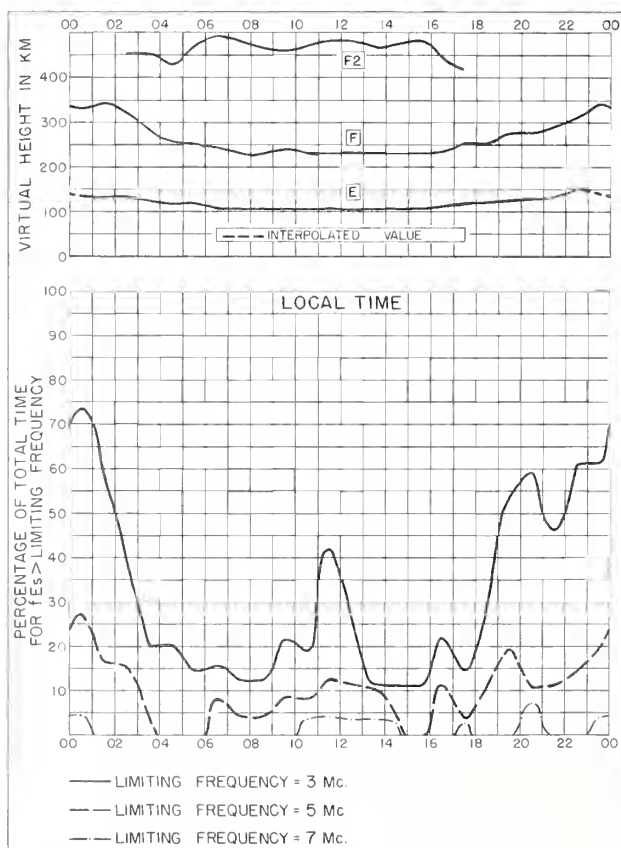


Fig. 96. LULEA, SWEDEN

JULY 1958

NBS 490

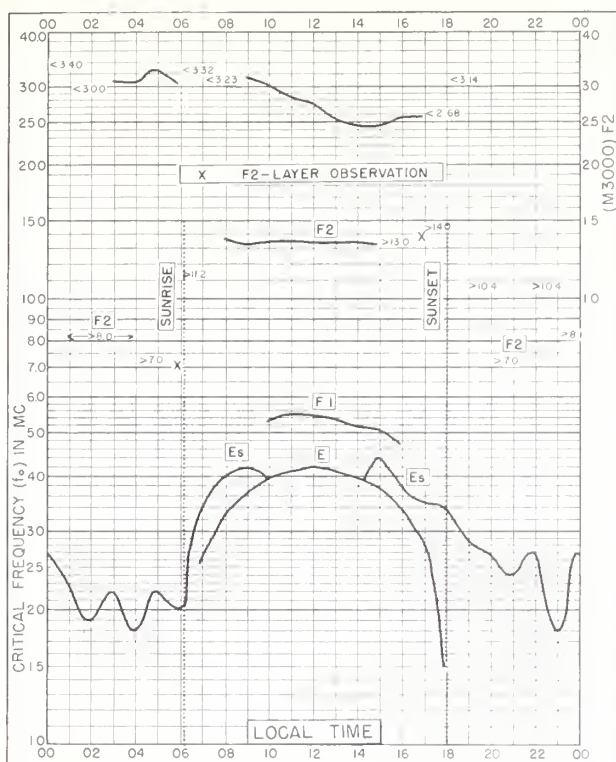


Fig. 97. LWIRO, BELGIAN CONGO
2.3° S, 28.8° E

JULY 1958

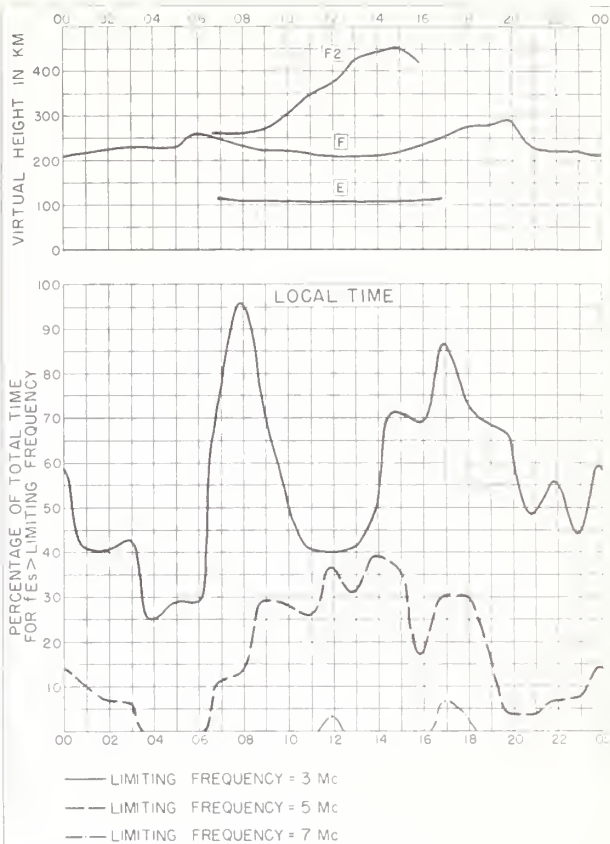


Fig. 98. LWIRO, BELGIAN CONGO

JULY 1958

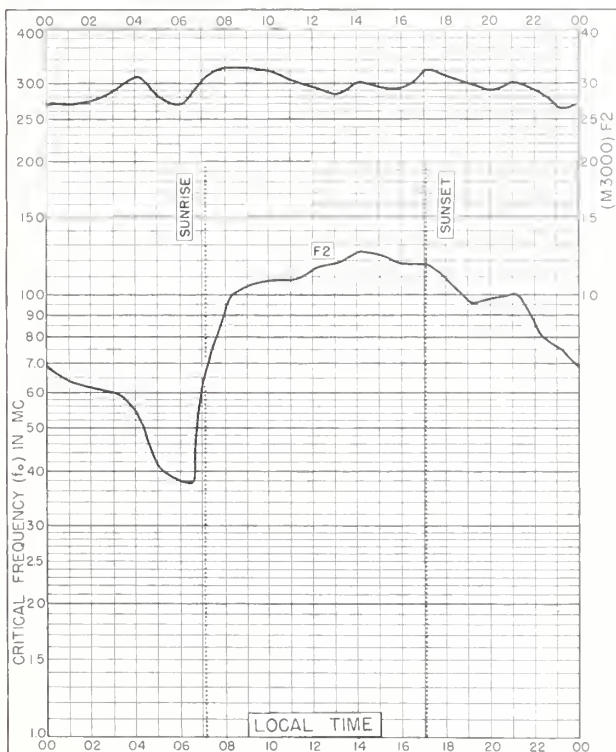


Fig. 99. BUENOS AIRES, ARGENTINA
34.5° S, 58.5° W

JULY 1958

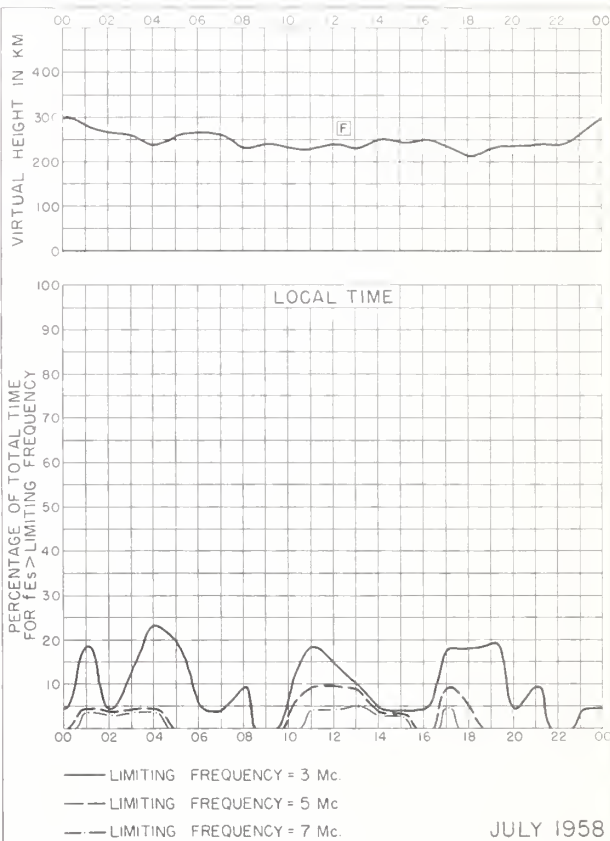
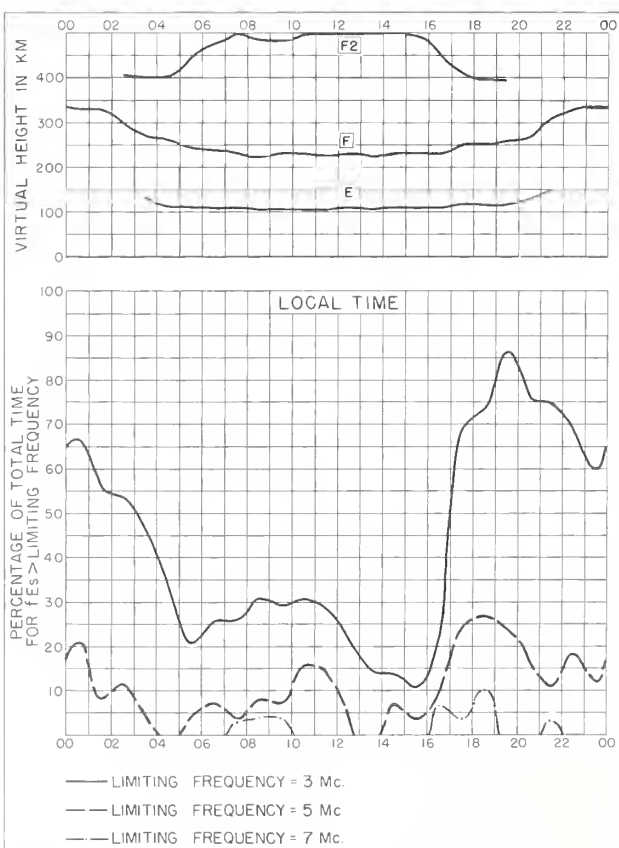
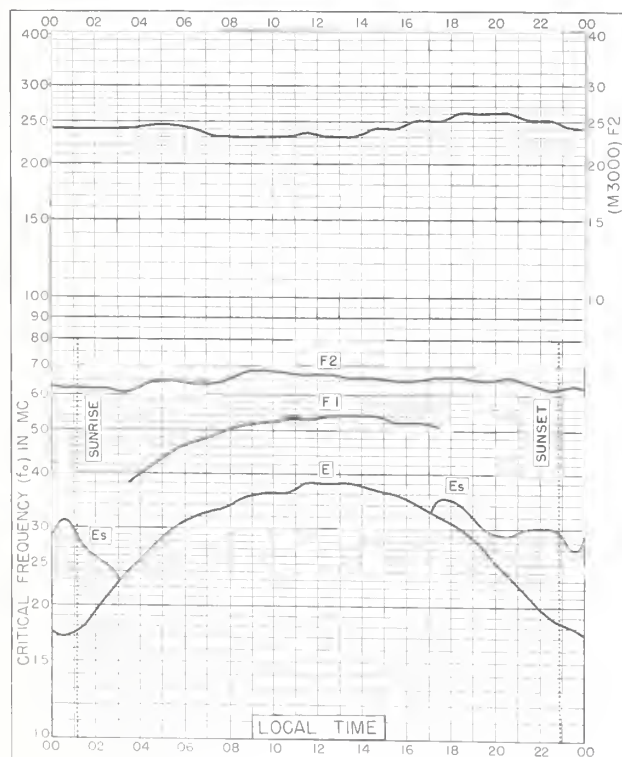
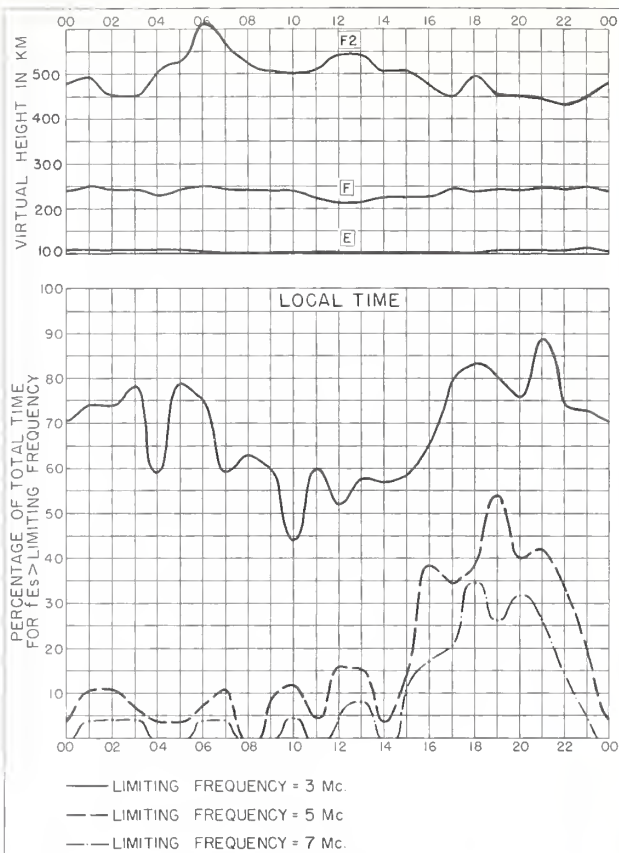
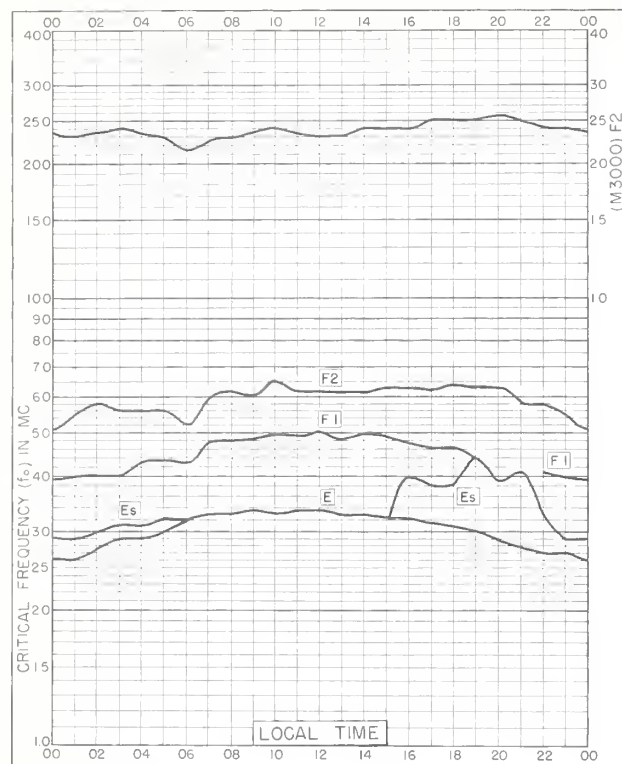


Fig. 100. BUENOS AIRES, ARGENTINA

JULY 1958



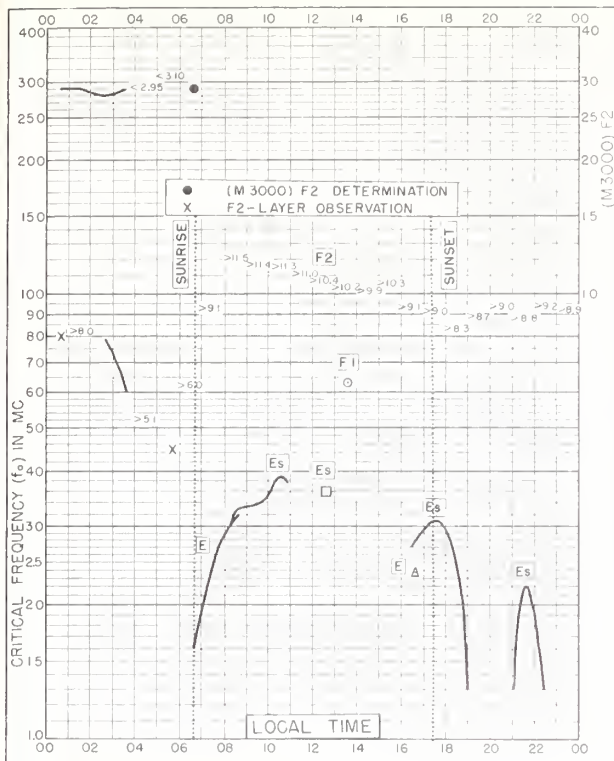


Fig. 105. La QUIACA, ARGENTINA
22.1°S, 65.6°W

JUNE 1958

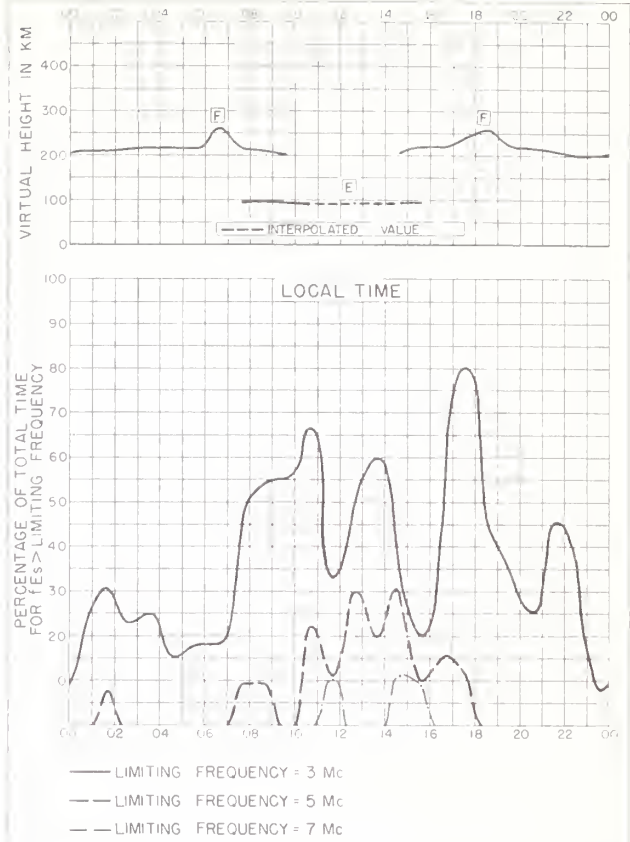


Fig. 106. La QUIACA, ARGENTINA

JUNE 1958

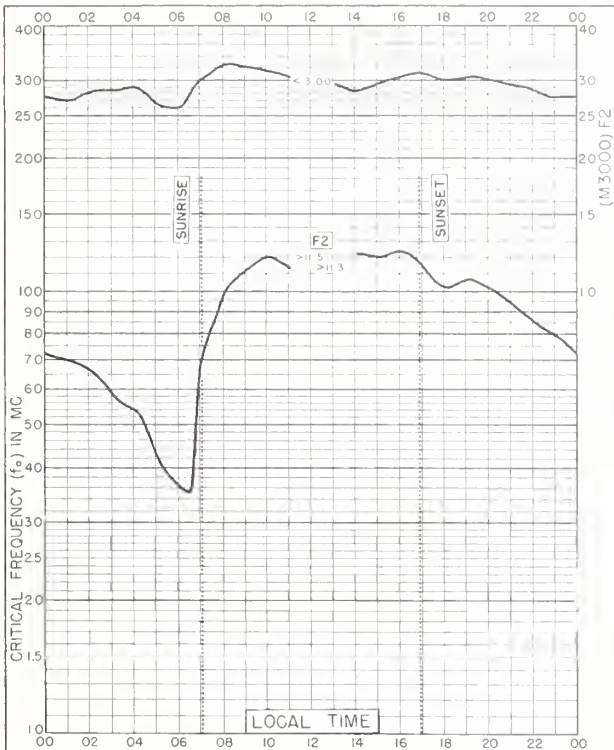


Fig. 107. BUENOS AIRES, ARGENTINA
34.5°S, 58.5°W

JUNE 1958

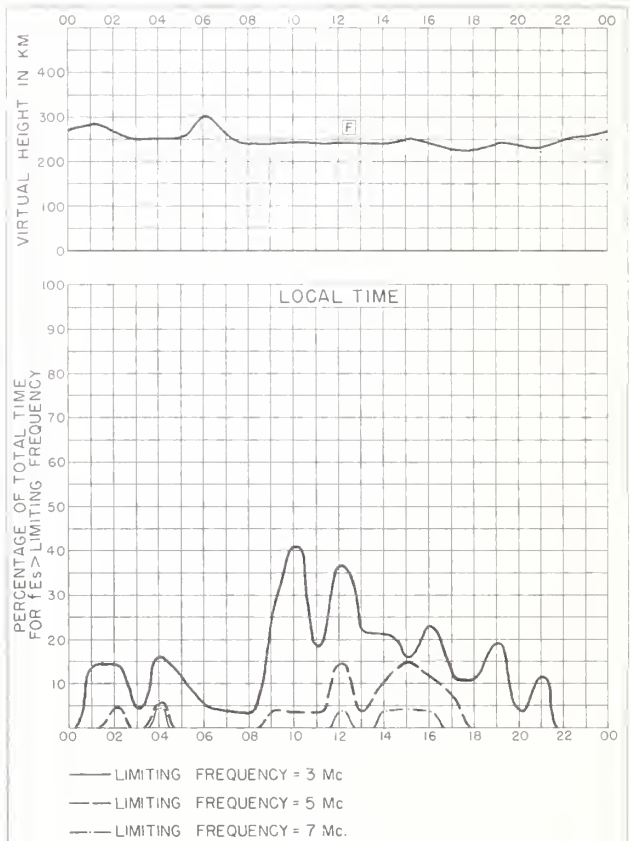


Fig. 108. BUENOS AIRES, ARGENTINA

JUNE 1958

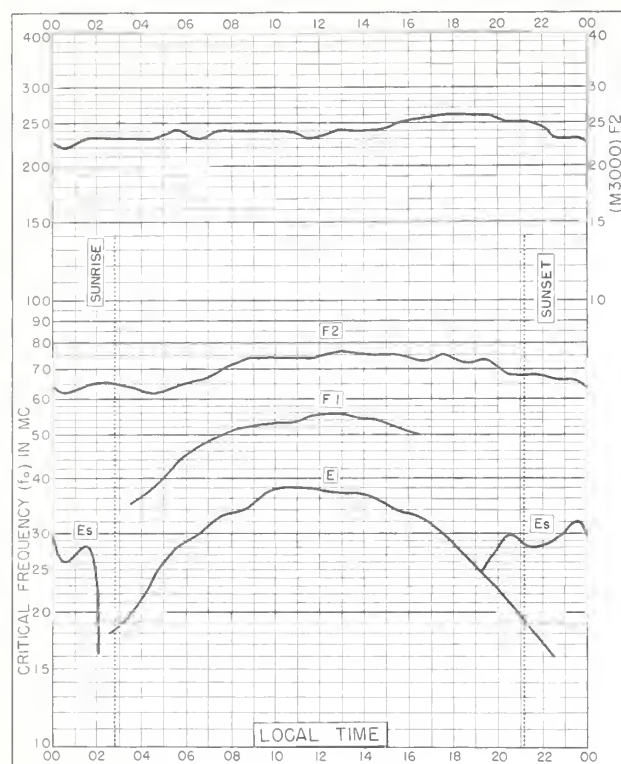


Fig 109. LULEÅ, SWEDEN
65.6°N, 22.1°E

MAY 1958

NBS 503

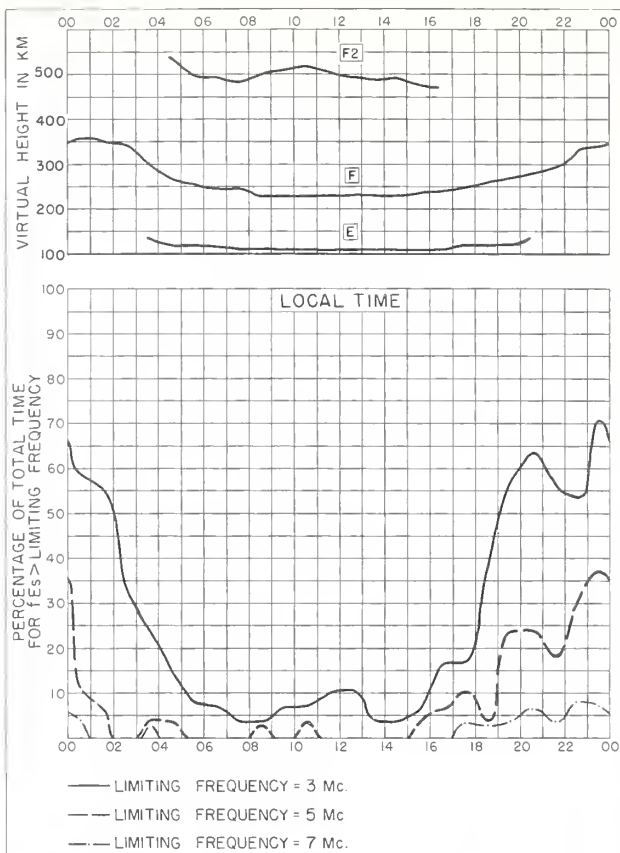


Fig 110. LULEÅ, SWEDEN

MAY 1958

NBS 490

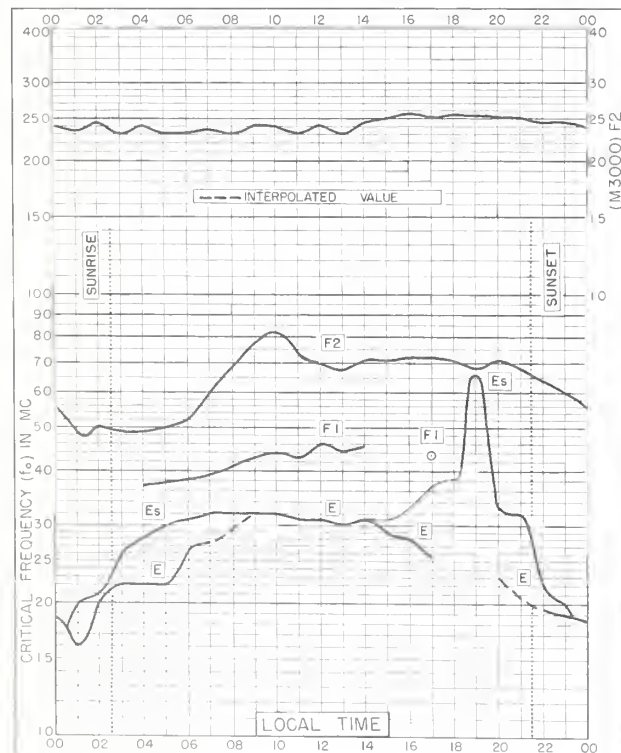


Fig 111. SVALBARD, NORWAY
78.2°N, 15.7°E

APRIL 1958

NBS 503

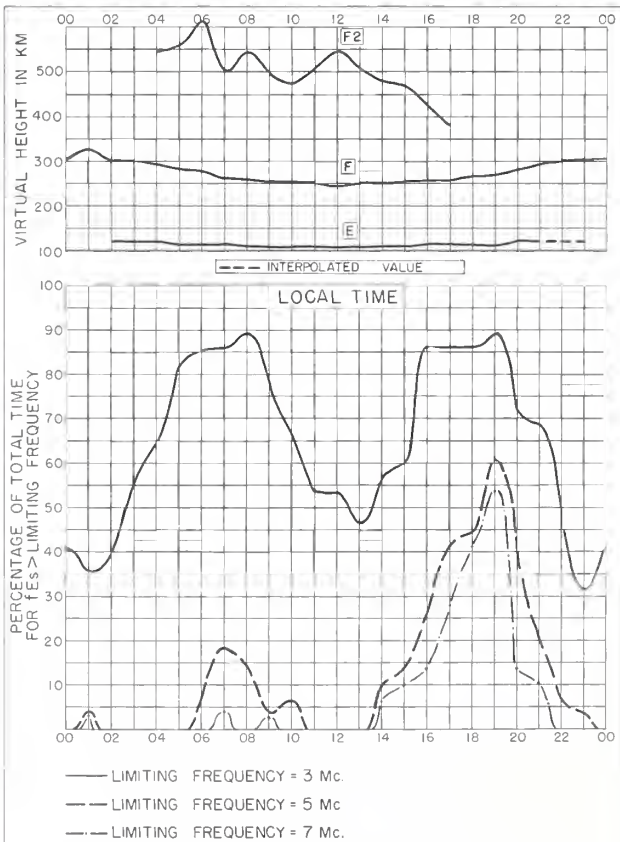


Fig 112. SVALBARD, NORWAY

APRIL 1958

NBS 490

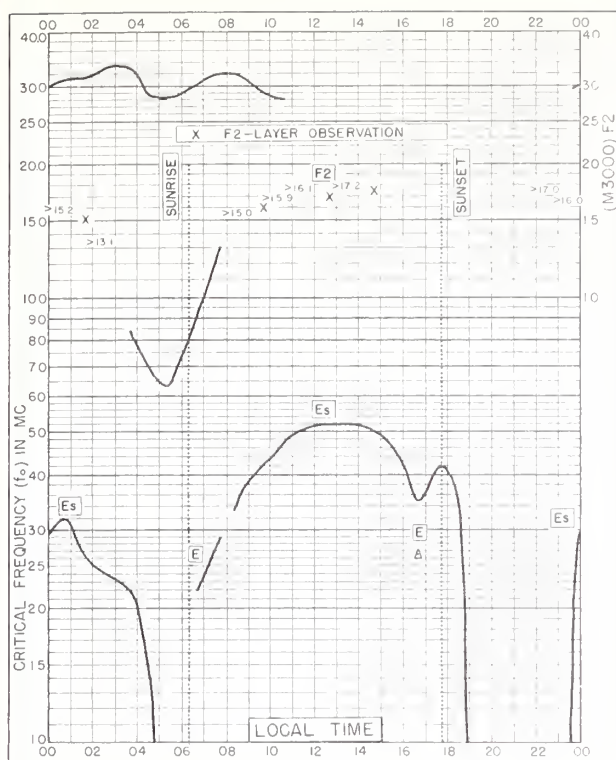
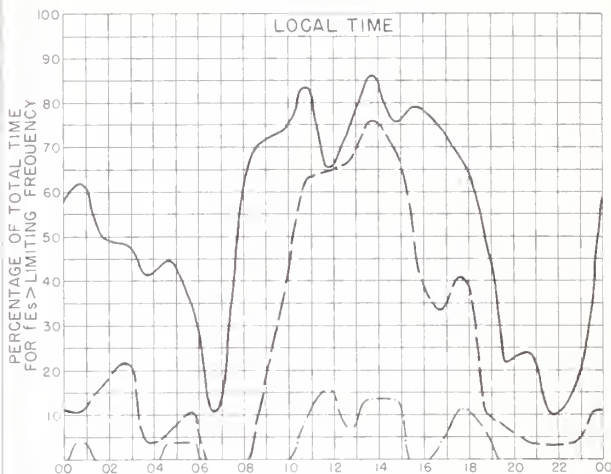
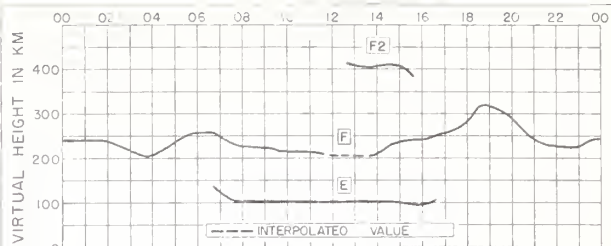


Fig. 113. TUCUMAN, ARGENTINA
26.9°S, 65.4°W

APRIL 1958



— LIMITING FREQUENCY = 3 Mc
 - - - LIMITING FREQUENCY = 5 Mc
 - · - · - LIMITING FREQUENCY = 7 Mc

Fig. 114. TUCUMAN, ARGENTINA

APRIL 1958

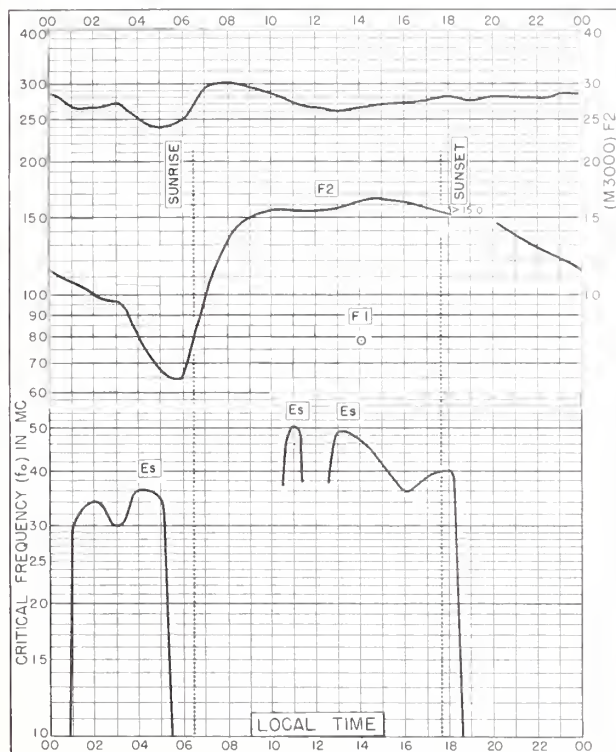
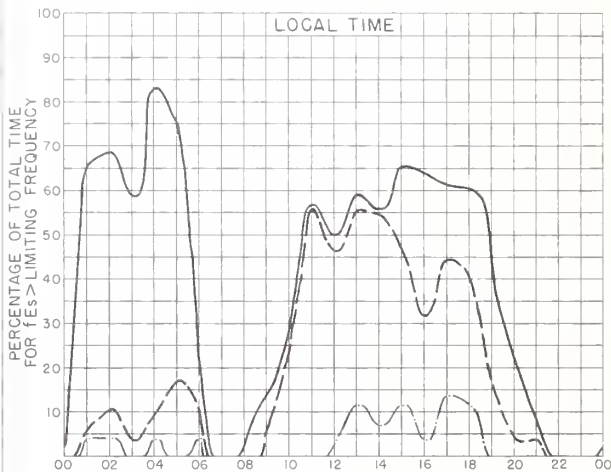
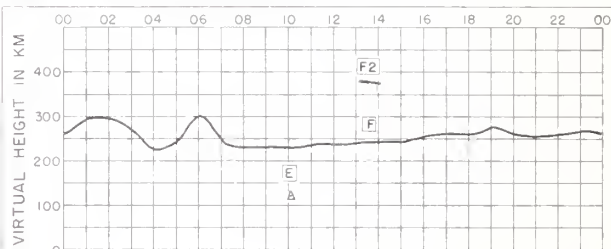


Fig. 115. BUENOS AIRES, ARGENTINA
34.5°S, 58.5°W

APRIL 1958



— LIMITING FREQUENCY = 3 Mc
 - - - LIMITING FREQUENCY = 5 Mc
 - · - · - LIMITING FREQUENCY = 7 Mc

Fig. 116. BUENOS AIRES, ARGENTINA

APRIL 1958

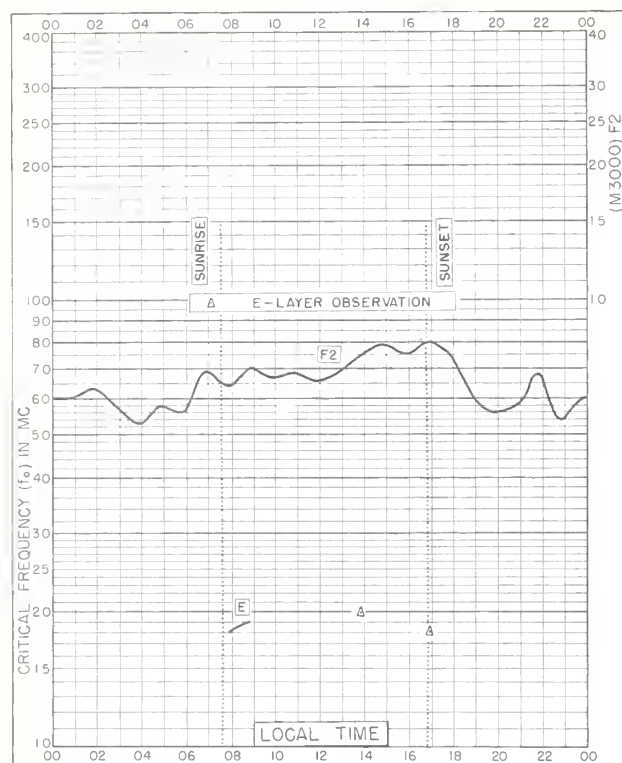


Fig 117. ALERT, CANADA
82.5°N, 62.7°W

MARCH 1958

NBS 503

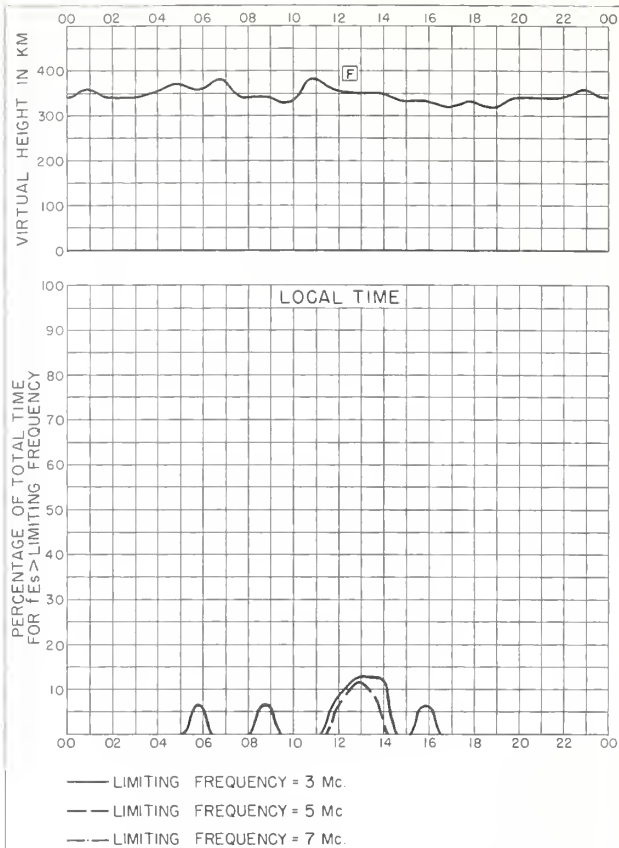


Fig 118. ALERT, CANADA

MARCH 1958

NBS 490

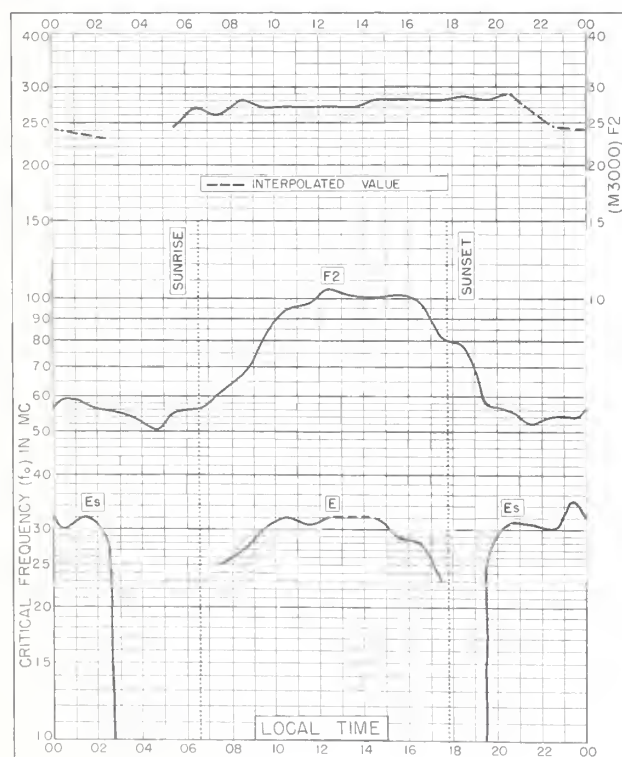


Fig 119. LULEA, SWEDEN
65.6°N, 22.1°E

MARCH 1958

NBS 503

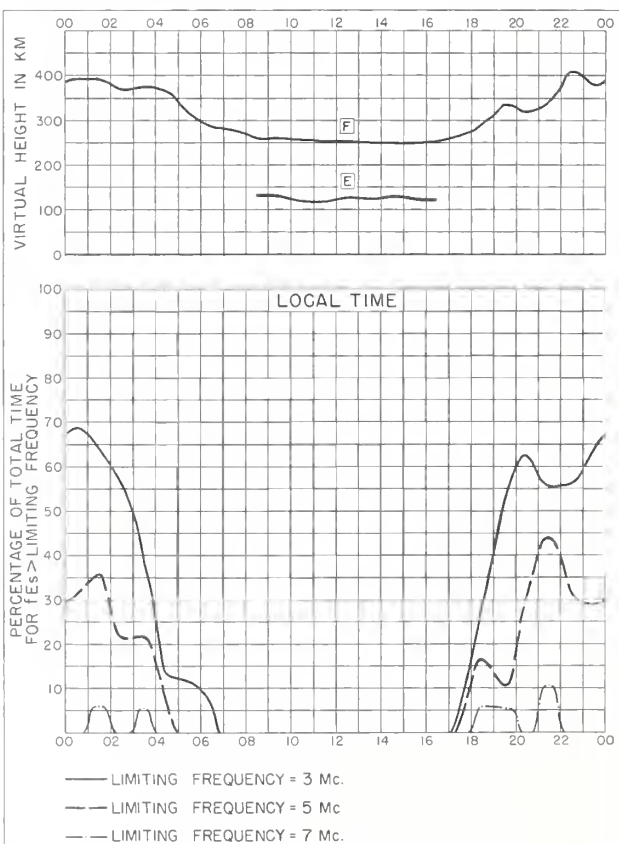


Fig 120. LULEA, SWEDEN

MARCH 1958

NBS 490

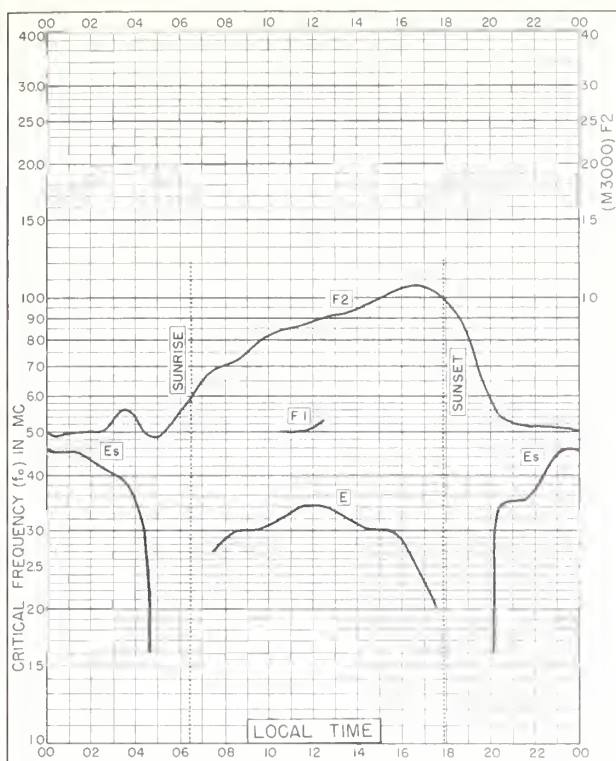


Fig. 121. MEENOOK, CANADA
54.6°N, 113.3°W

MARCH 1958

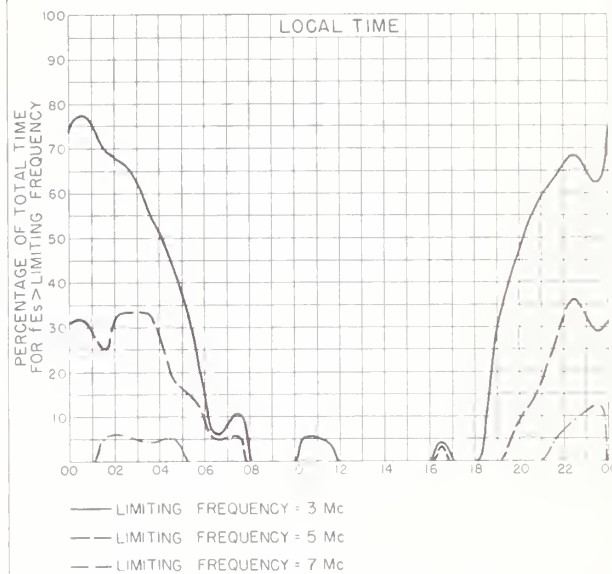
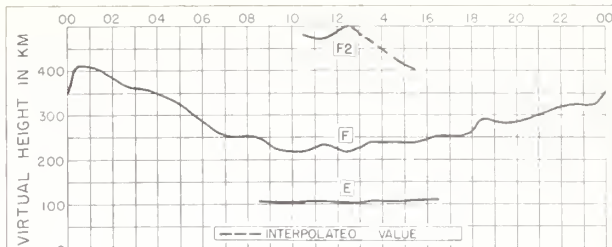


Fig. 122. MEENOOK, CANADA

MARCH 1958

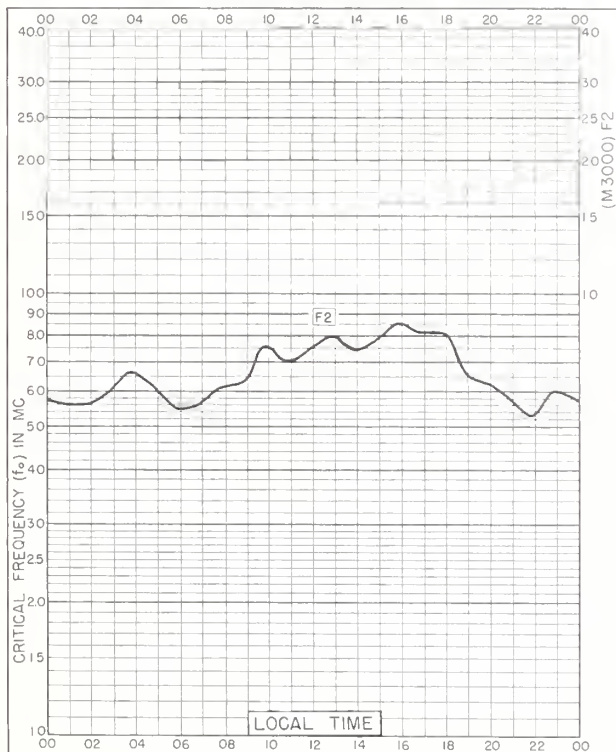


Fig. 123. ALERT, CANADA
82.5°N, 62.7°W

FEBRUARY 1958

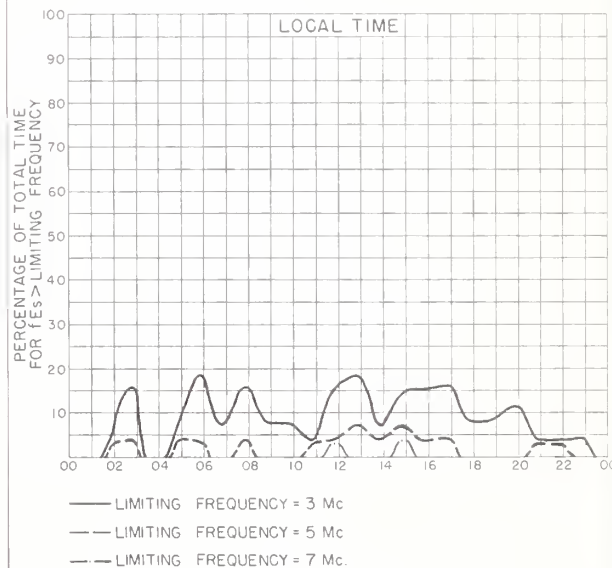
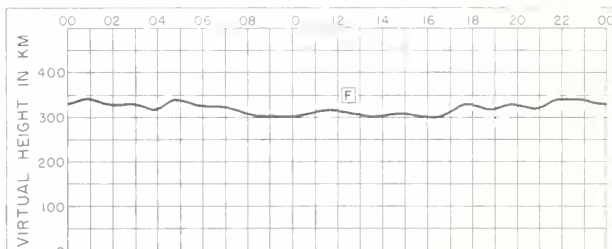
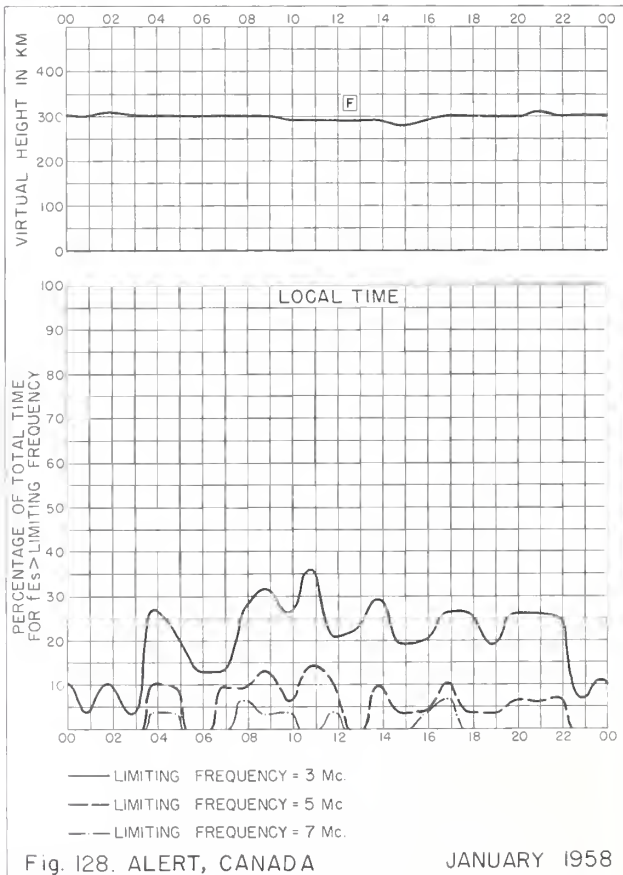
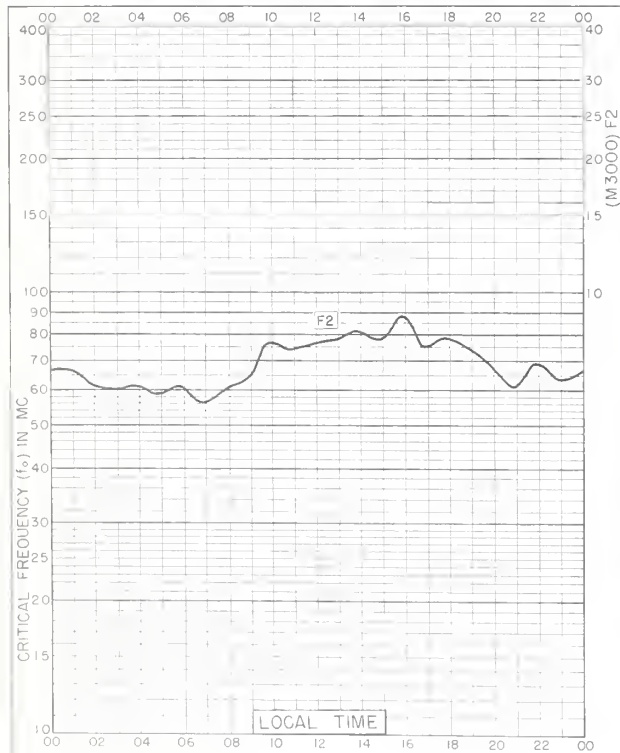
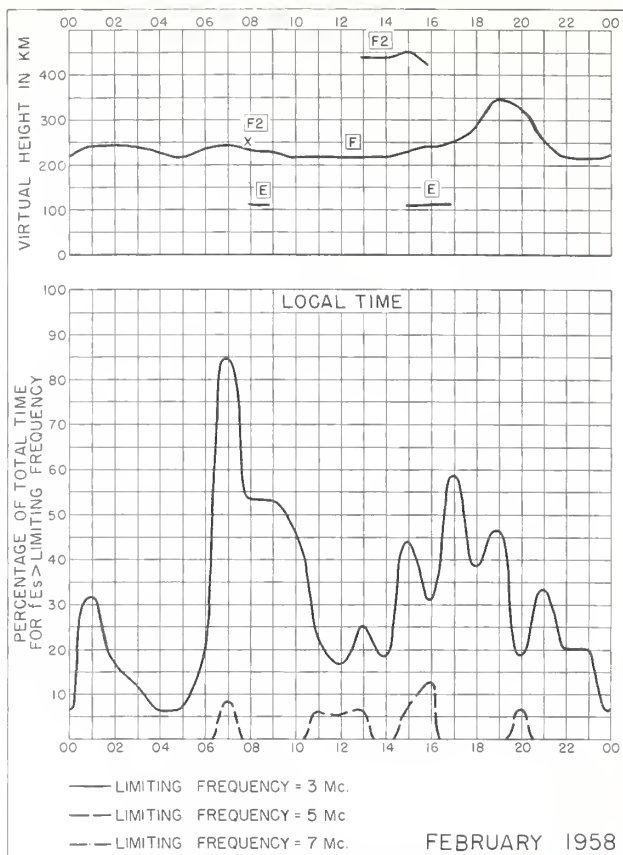
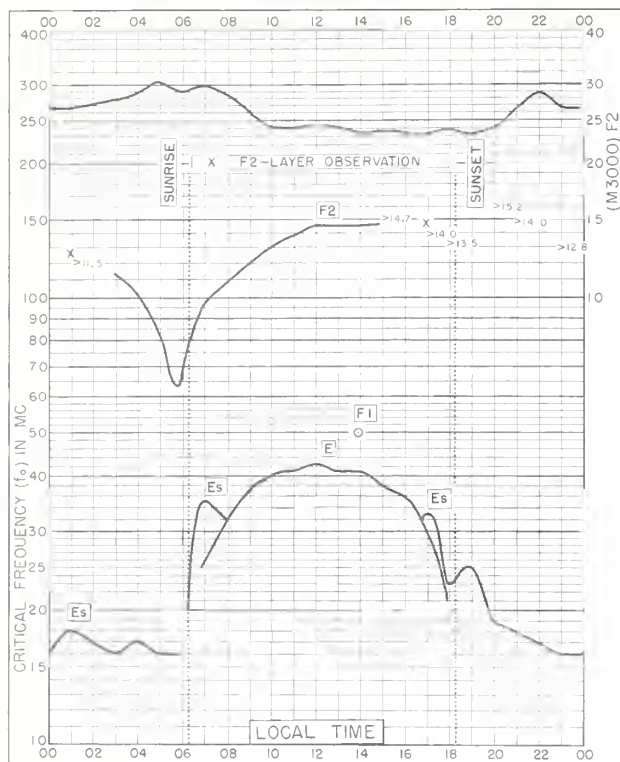
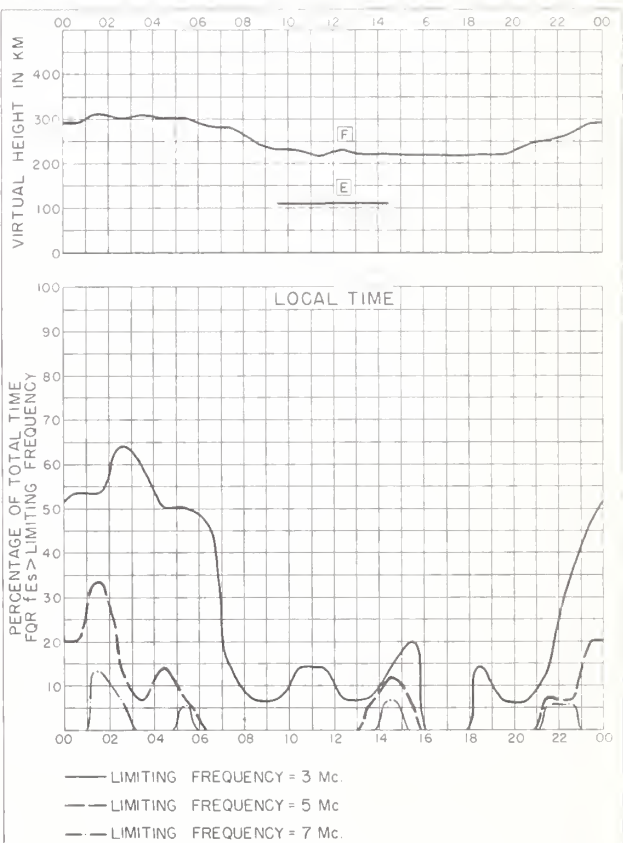
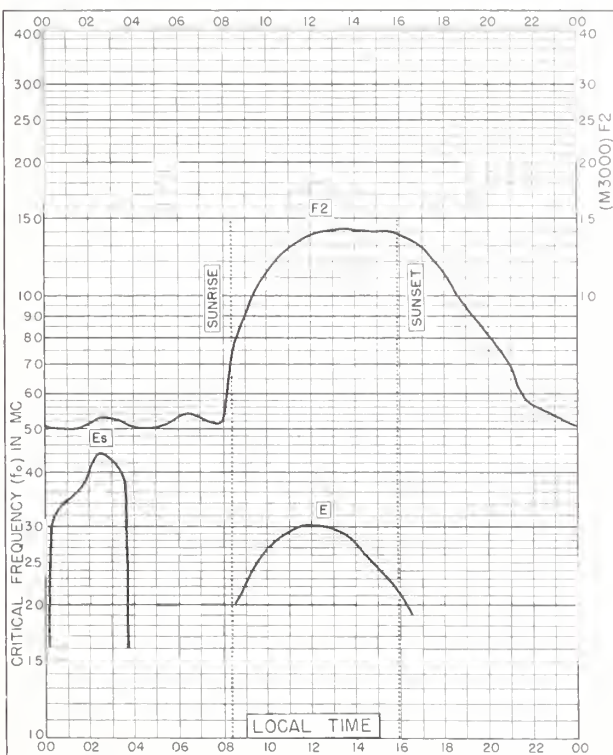
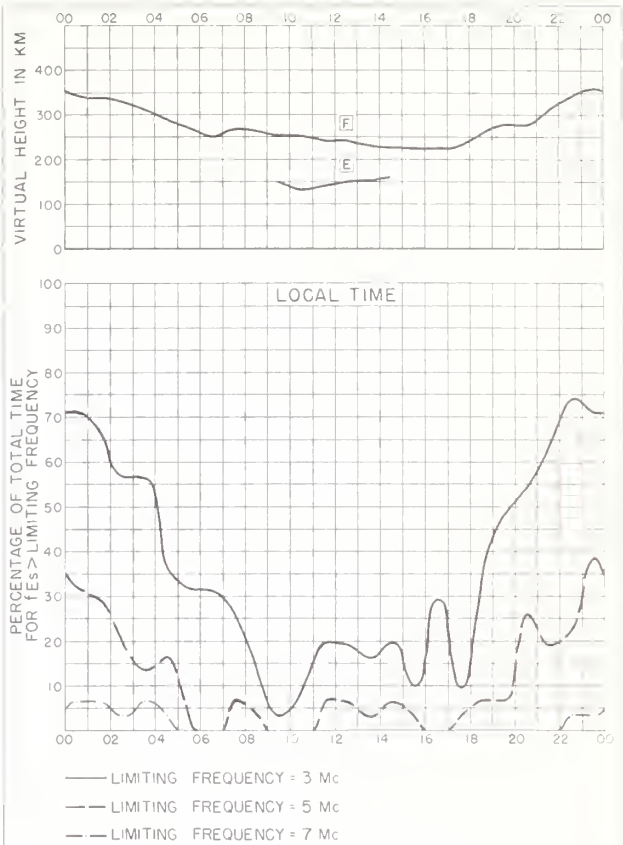
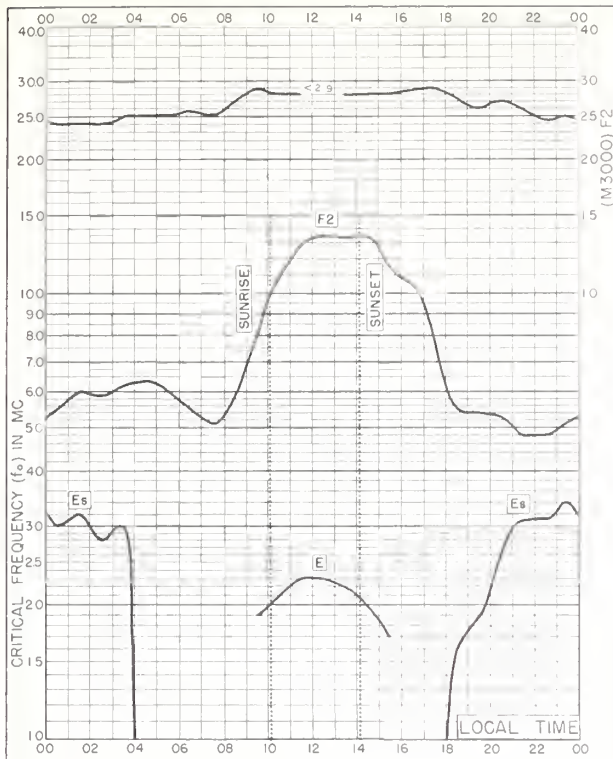


Fig. 124. ALERT, CANADA

FEBRUARY 1958





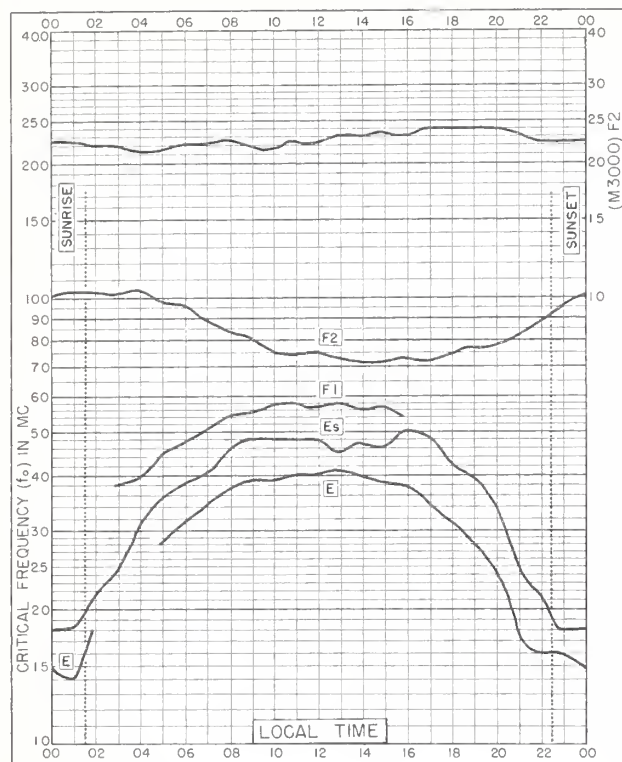


Fig 133. PORT LOCKROY
64.8°S, 63.5°W

DECEMBER 1957

NBS 503

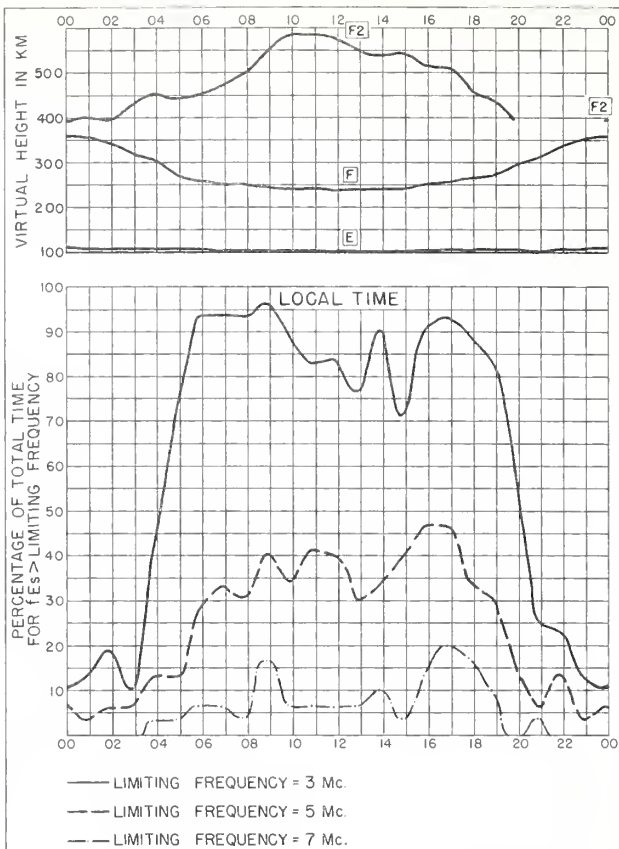


Fig 134. PORT LOCKROY

DECEMBER 1957

NBS 490

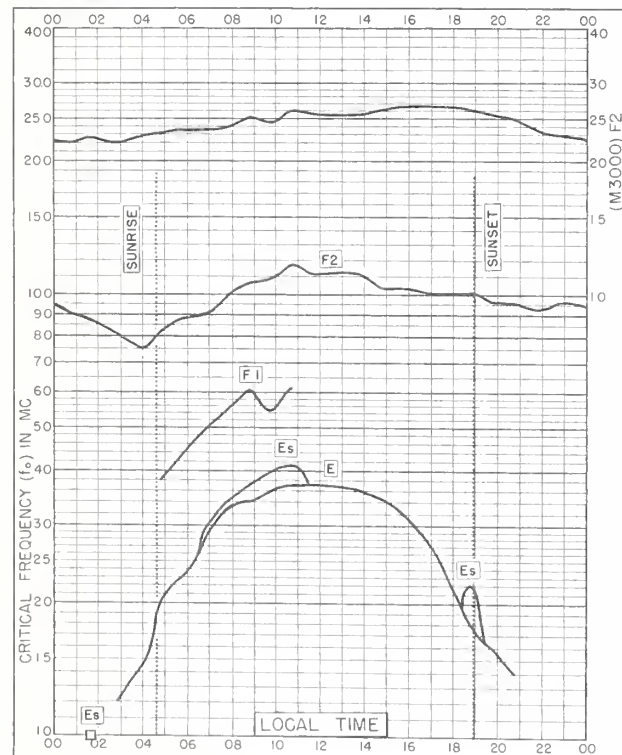


Fig 135. PORT LOCKROY
64.8°S, 63.5°W

OCTOBER 1957

NBS 503

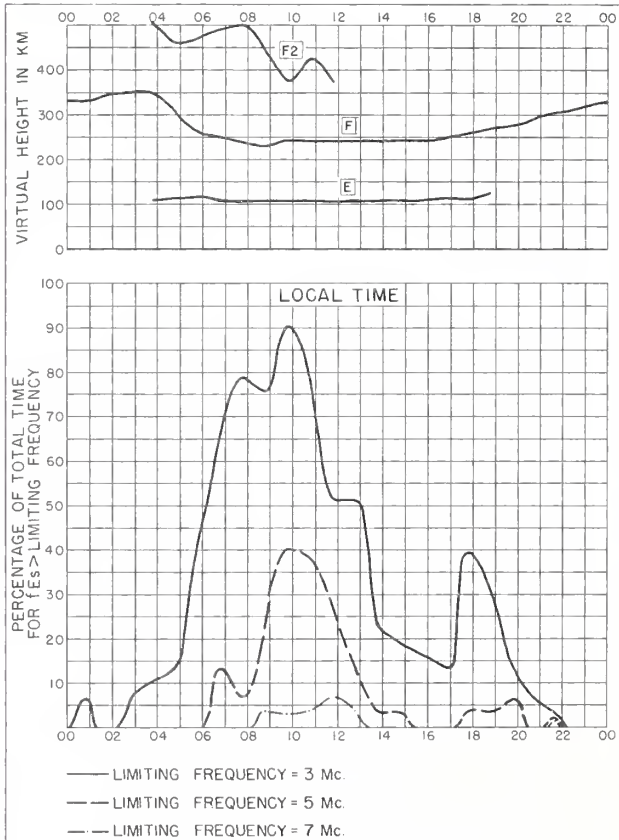
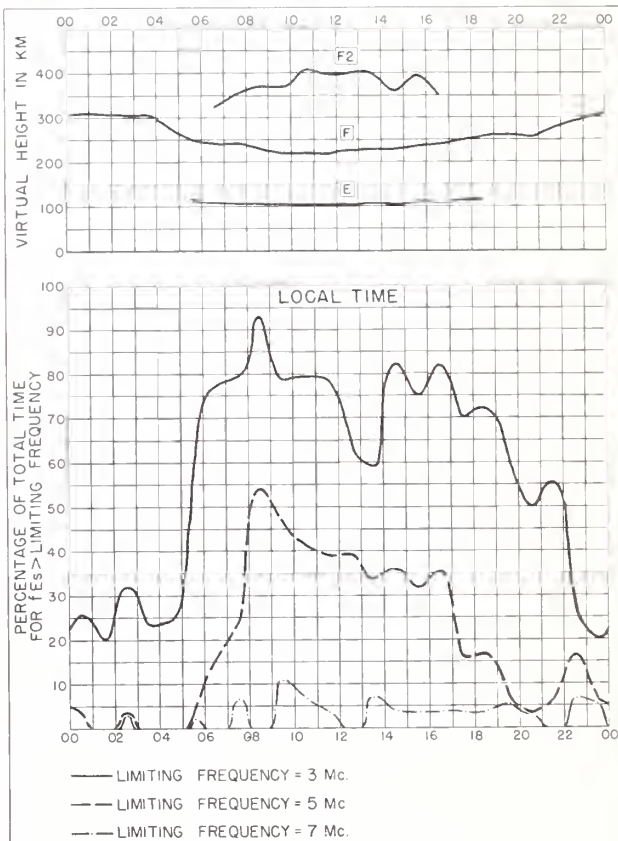
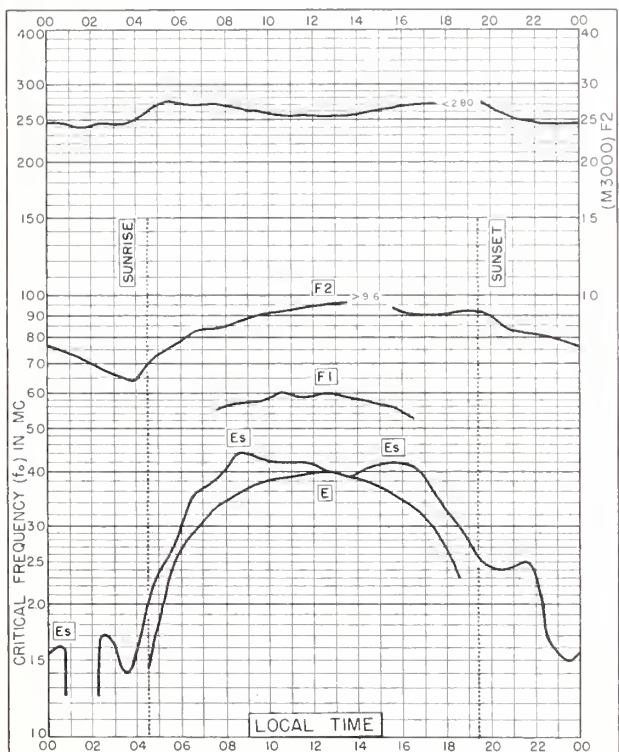
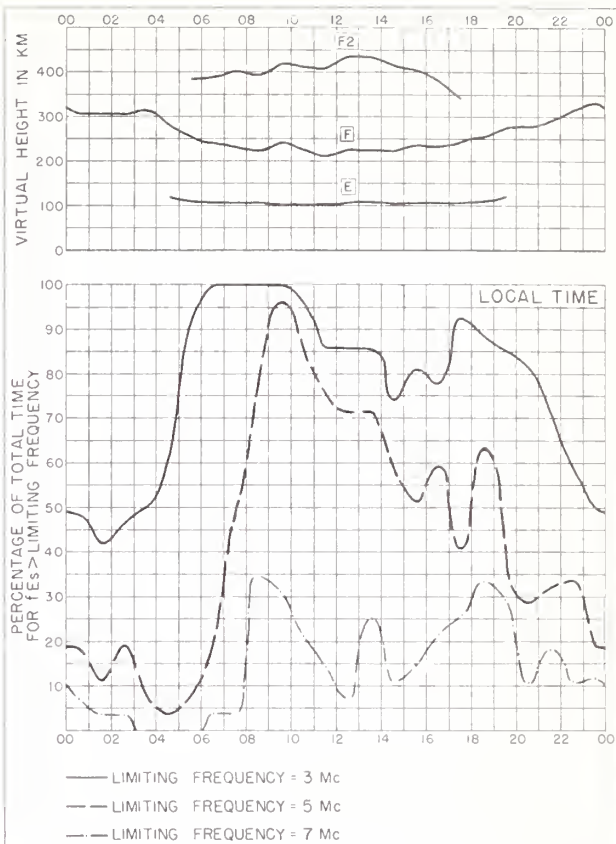
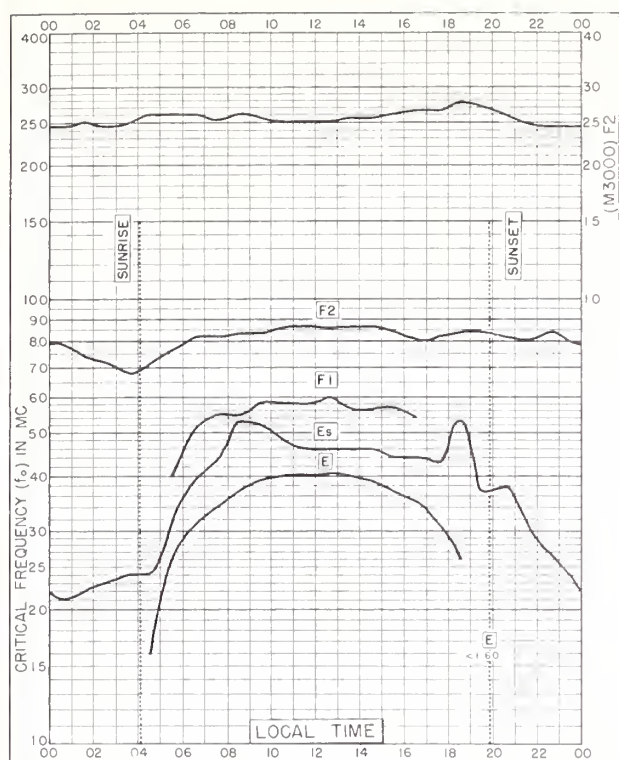
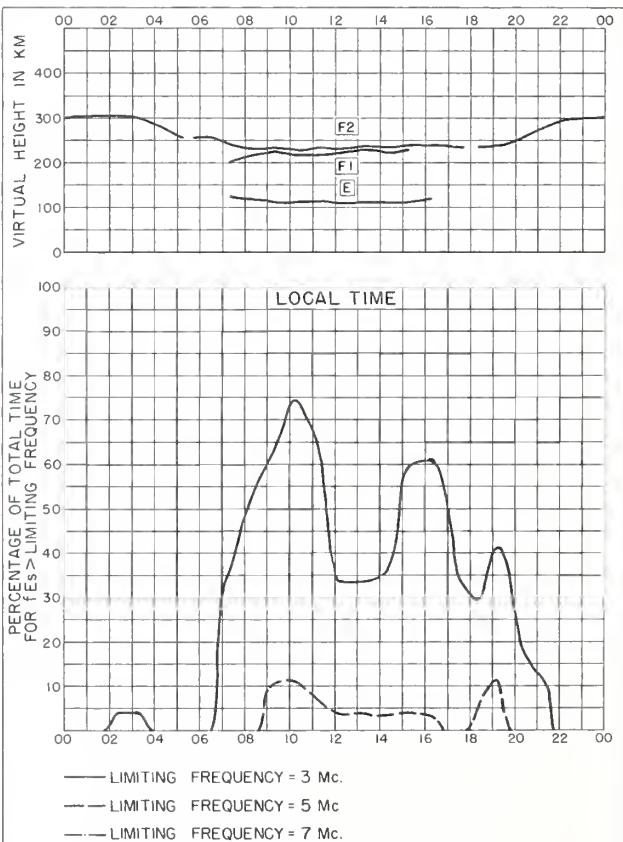
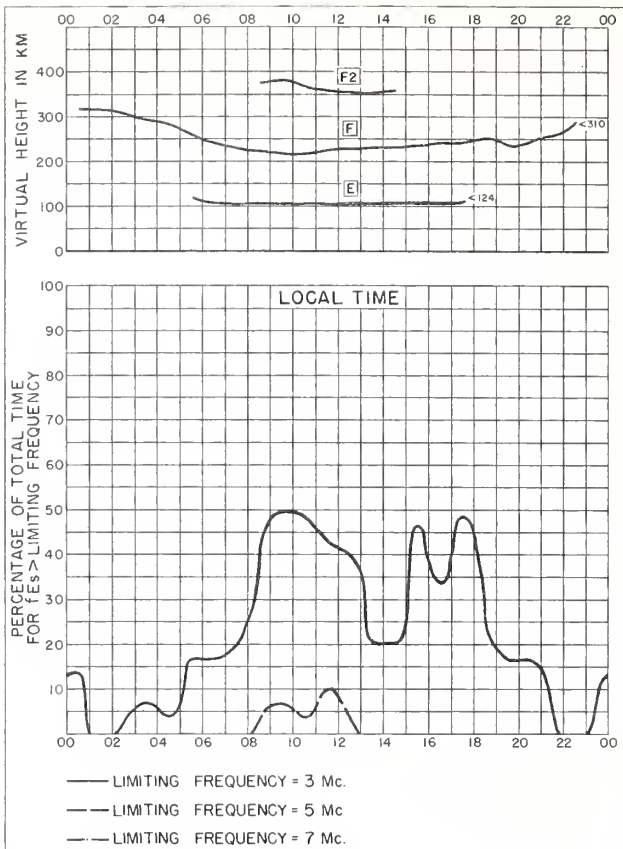
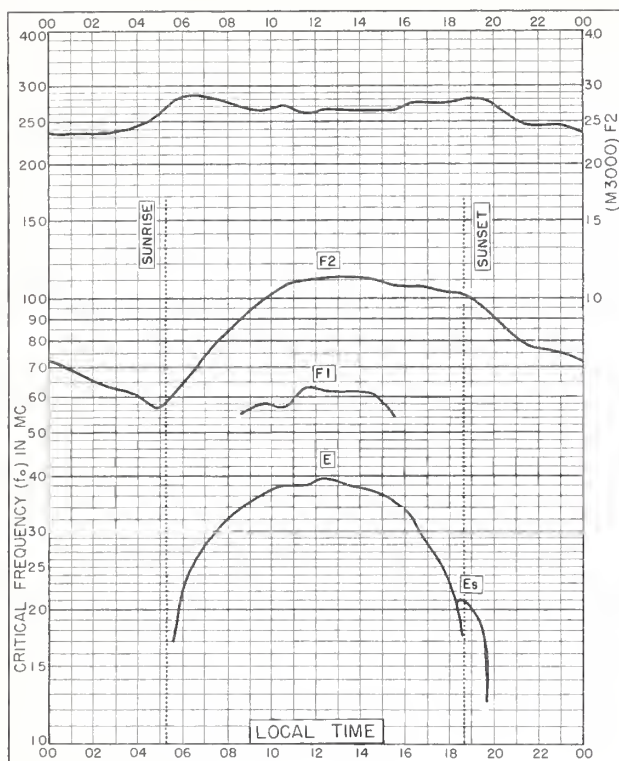


Fig 136. PORT LOCKROY

OCTOBER 1957

NBS 490





Index of Tables and Graphs of Ionospheric Data

in CRPL-F190 (Part A)

	<u>Table page</u>	<u>Figure page</u>
Adak, Alaska		
February 1960	1	15
Alert, Canada		
March 1958	10	42
February 1958	11	43
January 1958	11	44
Anchorage, Alaska		
March 1960	1	14
Baquo, P. I.		
March 1960	1	14
Bogota, Colombia		
December 1959	2	18
August 1959	4	22
Brisbane, Australia		
August 1959	4	23
Budapest, Hungary		
August 1959	3	21
October 1956	12	48
Buenos Aires, Argentina		
August 1958	8	35
July 1958	9	37
June 1958	9	39
April 1958	10	41
Byrd Station		
January 1959	7	32
Cape Canaveral, Florida		
August 1958	8	34
Concepcion, Chile		
February 1959	7	31
Fairbanks, Alaska		
March 1960	1	13
February 1960	1	15
Formosa, China		
August 1959	4	22
Freiburg, Germany		
June 1957	12	47
May 1957	12	47
April 1957	12	48
Hobart, Tasmania		
September 1958	7	33

Index (CRPL-F190 (Part A), continued)

	<u>Table page</u>	<u>Figure page</u>
Huancayo, Peru		
February 1960	2	16
January 1960	2	17
Ibadan, Nigeria		
July 1959	5	27
Kiruna, Sweden		
August 1959	3	19
June 1959	6	29
La Paz, Bolivia		
January 1960	2	17
La Quiaca, Argentina		
June 1958	9	39
Lindau/Harz, Germany		
August 1958	8	34
Lulea, Sweden		
August 1959	3	20
July 1959	4	24
July 1958	8	36
June 1958	9	38
May 1958	10	40
March 1958	10	42
January 1958	11	45
Lwiro, Belgian Congo		
June 1959	6	30
July 1958	9	37
February 1958	11	44
Meanook, Canada		
March 1958	11	43
January 1958	11	45
Natal, Brazil		
November 1959	2	18
Nurmijarvi, Finland		
July 1959	5	25
August 1958	7	33
Point Barrow, Alaska		
March 1960	1	13
Pole Station		
November 1958	7	32
Port Lockroy		
December 1957	12	46
October 1957	12	46
Rome, Italy		
August 1959	3	21
July 1959	5	26

Index (CRPL-F190 (Part A), concluded)

	<u>Table page</u>	<u>Figure page</u>
Singapore, British Malaya		
July 1959	5	27
Slough, England		
June 1959	6	29
Sodankyla, Finland		
August 1959	3	20
Sottens, Switzerland		
July 1959	5	26
Svalbard, Norway		
July 1958	8	36
June 1958	9	38
April 1958	10	40
Thule, Greenland		
January 1960	2	16
Townsville, Australia		
August 1959	4	23
July 1959	6	28
June 1959	6	30
May 1959	7	31
August 1958	8	35
Tromso, Norway		
August 1959	3	19
July 1959	4	24
June 1959	6	28
Tucuman, Argentina		
April 1958	10	41
Upsala, Sweden		
July 1959	5	25

